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USSR Report

ECONOMIC AFFAIRS



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CONTENTS

ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

Legal Implications of New Management Methods Viewed (V. Laptev; PLANOVYE KHOZYAYSTVO, No 3, Mar 86).....	1
Enterprise Independence: Goal of Economic Restructuring (A. Sadikov; IZVESTIYA, 13 Mar 86).....	12
Abalkin on Acceleration, Production Relations (L. Abalkin; various sources, Mar 86).....	18
Importance of Social Development Stressed	18
Self-Management, Enterprise Praised	27
Implications of Social Ownership Spelled Out	40

PLANNING AND PLAN IMPLEMENTATION

Production Planning Trends, Proportionality Concept Evaluated (V. Smirnov; PLANOVYE KHOZYAYSTVO, No 3, Mar 86).....	45
--	----

INVESTMENT, PRICES, BUDGET, AND FINANCE

Strengthening of Local Budgets Revenue Base Advocated (V.G. Panskov; FINANSY SSSR, No 3, Mar 86).....	52
--	----

RESOURCE UTILIZATION AND SUPPLY

Ecological Aspects of Intensification Examined (Yu. Chernegov; EKONOMICHESKAYA GAZETA, No 19, May 86)....	63
--	----

ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

LEGAL IMPLICATIONS OF NEW MANAGEMENT METHODS VIEWED

Moscow PLANOVYE KHOZYAYSTVO in Russian No 3, Mar 86 pp 92-98

[Article by V. Laptev, corresponding member, USSR Academy of Sciences: "Legal Support for the New Management Methods: a Discussion"]

[Text] The new edition of the CPSU Program indicates that accelerating the socio-economic development of the country requires continuous improvement in the leadership of the economy and reliable and effective functioning of the economic mechanism. In accordance with this statute, the Basic Directions of Economic and Social Development of the USSR for 1986-1990 and the Period up to the Year 2000 are oriented on further improving the system of administration and management, called upon to ensure the organic unity and effective interaction of planning, economic levers and incentives and organizational management structures. In particular, the task is posed of shifting all branches of the economy to the new management methods during the 12th Five-Year Plan. These methods arose during the course of an experiment to expand the rights of industrial enterprises and associations, and planning and economic activity. The experiment is usually called an economic one, but essentially it is economic-legal and is aimed at expanding the rights of enterprises and associations.

Economic activity and economic leadership in our country has assumed legal forms. Therefore, measures to expand economic independence and initiative of enterprises and associations, which in substance are economic, are carried out through improving the legal regulation of economic relations. Without improving economic legislation and without a legal establishment of the rights, duties and responsibilities of economic organs it is impossible to improve socialist management.

Legal regulation of economic relations under socialist conditions constitutes an important form of leadership of social production and an effective instrument of its organization. The economic mechanism is a complex concept, which includes economic, organizational-managerial, socio-psychological and legal elements. Improving this mechanism is senseless without improving the legal bases for socialist management.

The Basic Directions emphasizes the importance of strengthening legality and law and order in the sphere of the country's economy, which is directly related to the development of new management methods.

Legal support for the new management methods can be viewed in two aspects. First, from the positions of legal regulation of economic relations and the improvement of legislation. This aspect of the legal bases of the new management methods is important in connection with the fact that existing economic legislation is disseminated to enterprises and associations working under the new conditions. Second, the legal bases of the new management methods can also be viewed from the standpoint of special normative documents, which relate to the development of these methods.

In recent years measures have been adopted which are directed toward improving economic legislation. A number of obsolete normative documents have been abolished. In the USSR Law Code a special section has been set aside, which is devoted to economic legislation.

At the same time, in assessing the overall state of economic legislation, it is necessary to state that even today it lags behind the tasks of developing the economy and suffers from significant shortcomings. This legislation is excessively unwieldy, since it includes tens of thousands of different normative documents, which are at times difficult to sort out and still more difficult to apply in practice. Frequently disagreements, and sometimes even direct contradictions, arise among existing legislative norms. No unified regulation has yet been provided for economic relations which take shape during the process of carrying out economic activity and leadership of the economy, or, as they are customarily called, horizontal and vertical economic relations. The volume of departmental normative documents is great. Departmental instructions in many instances negatively affect socialist management, since they regulate the activity of enterprises and associations with unjustified rigidity. Legal guarantees of the independence of enterprises and associations are not provided for in legislation, which leads in practice to violation of their economic rights.

The main reason for shortcomings in economic legislation, in our opinion, is the absence of a single pivotal law which would facilitate the prioritization of the numerous documents in effect in this area. For this reason the number of departmental normative documents is increasing. Questions exist which objectively require legal regulation, but which are not resolved at the level of laws and governmental decrees. As a result, departments "legislate" independently, to the extent of their understanding, guided primarily by departmental interests, and do so badly in most cases.

The way out of this situation is through publication of a USSR Economic Code, which would make it possible to bring economic legislation into a unified system. This will not only help to improve legal support of socialist management, but will also constitute the basis for further development of legislation in this direction.

Theoretical bases for improving the legal regulation of economic relations have been worked out and specific proposals have been prepared for improving economic legislation in the science of economic law. In particular, the USSR Academy of Sciences Institute of the State and Law, along with economists, has developed a draft USSR Economic Code. This draft was approved at a joint session of the USSR Academy of Sciences Economics Department and the

Philosophy and Law Department, with the participation of practical workers in the economy.

The joint preparation of a draft Economic Code by jurists and economists is completely justified. The working out of proposals to improve the legal regulation of economic relations must be further developed. It is namely in this way that legal support of socialist management can be improved.

At the same time, as was already noted, along with general legal bases for socialist management, special normative documents relating to the extension of economic rights of enterprises and associations and the introduction of new management methods are also of great importance. These normative documents include joint decrees by the CPSU Central Committee and USSR Council of Ministers, which define the fundamental aspects of the new management conditions; governmental resolutions relating to individual branches of industry shifted to these conditions; and departmental normative documents which specify the procedure for implementing the new management methods in individual branches or on particular issues. The correct and precise application of these normative documents largely predetermines the successful implementation of instructions for shifting all industry and other economic branches to the new conditions.

At present, work is underway in the ministries and departments which have shifted to the new conditions to prepare appropriate normative methodological documents. In this work it is necessary to take into account the experience accumulated in the legal regulation of the activity of enterprises and associations under the experimental conditions, and not repeat the errors committed in the development of departmental normative documents for the industrial branches which were first to shift to the new management conditions. Here I would like to discuss two aspects in particular: ensuring the methodological nature of corresponding documents and observing legality when publishing them.

The objective of publishing departmental normative documents pertaining to the introduction of the new management methods is to foresee methodological instructions and recommendations aimed at supporting the successful application of the new management methods. However, frequently in practice the ministries and departments issuing such documents limit themselves to setting down the content of governmental resolutions, and do not foresee specific provisions relating to the application of the new methods in the branch, or in solving questions of a functional nature. Thus, in particular, when departmental documents were issued on the procedure for planning under experimental conditions, in some ministries the specific time periods for the development of plan documents and the forms and procedures for relationships among different economic organs when carrying out this work were not always defined, and points from the Statutes on deliveries of products of technical importance and consumer goods, and of other normative documents for regulating economic relations, were frequently duplicated. All of this reduces the effectiveness of such normative documents and deprives them of a methodological nature.

Another shortcoming which is also characteristic of many departmental normative documents published to implement the new management conditions is the inclusion in them of provisions which in fact are aimed at limiting the rights of enterprises and associations. Let us give an example. In accordance with the experimental conditions, in the case of 100 percent fulfillment of negotiated commitments, enterprises and associations can increase by 15 percent their withholdings for the material incentive fund. However, the USSR Ministry of Finance explained that additional withholdings for the material incentive fund can take place only when there is profit in excess of that planned. Such an explanation is unjustified from an economic standpoint and is incorrect from legal positions, since a department does not have the right to change the provisions of a governmental normative document. Such a change signifies a violation of law, which leads in this case to limiting the rights of enterprises and associations.

An expansion of the rights of enterprises and associations is a program requirement of the party. A number of decrees have been published on this matter. For example, the 1955 decree on expanding the rights of enterprise directors; the 1965 Statute on the Socialist State Production Enterprise; the 1974 Statute on the Production Association (Combine) and the CPSU Central Committee and USSR Council of Ministers Decree No. 659 of 14 Jul 83, "On Additional Measures to Expand the Rights of Industrial Production Associations (Enterprises) in Planning and Economic Activity and to Increase the Responsibility for the Results of Their Work," which became the basic normative document for carrying out the experiment, aimed at expanding the rights of enterprises and associations. However, this problem has still not been solved for once and for all.

One of the reasons for this situation has already been stated -- the abundance of departmental normative documents, which under the pretext of specificity and establishment of a procedure for applying the norms about expanding the rights of enterprises and associations, in fact limited these rights. This was the case, for example, with respect to the Statute on the Socialist State Production Enterprise. That Statute provided for a substantial expansion in the economic rights of enterprises, but by subsequent departmental instructions these rights were in many cases emasculated.

Another reason is the lack of a necessary systematic approach in solving this question. The rights of enterprises and associations were expanded without simultaneously clarifying the area of competency of higher economic organs, which, using their previously established competence, limited the rights of the primary economic elements. Consequently, the rights of enterprises, associations and organs of economic leadership must be determined in a coordinated manner, and it is necessary to provide unified regulation of economic relations, horizontally and vertically, which will make it possible to achieve a real expansion in the rights of the primary production element.

It also must be noted that at present a system of establishing specific rights of enterprises and associations is being applied in our legislation, in accordance with which they have only the rights directly envisioned in legislation, and can carry out only activity which has been permitted. This is essentially an orientation on limiting their rights and capabilities, and

it fetters the initiative of the primary production element. Therefore, it seems necessary to shift to the opposite method of determining the rights of enterprises and associations, which has been provided for in legislation, which is that the primary production element may carry out any activity to fulfill its lawful tasks, other than that which has been prohibited by legislation or assigned to other organs. Then enterprises and associations will be able to do not only that which is directly permitted by legislation, but also that which is not prohibited by legislation. It is precisely such an approach which seems necessary under present conditions to solve the task of expanding the economic rights of enterprises and associations.

At the same time, this not only does not exclude, but it assumes a determination of specific rights of enterprises and associations in the various areas of their activity. However, enumeration of their rights must not be exhaustive in nature, but must concern only the most important aspects of economic activity, most of all the establishment of a legal regime of material and financial resources. Although enterprises and associations are not the legal owners of property assigned to them, their rights to have at their disposal material and financial resources, as well as property, must be significantly expanded.

In this regard, important measures have been provided for by normative documents relating to the development of the new management methods. Among them must be noted, first of all, the creation within enterprises and associations of a financial reserve, owing to profit in excess of the plan and part of the supplement to wholesale prices for high quality products. The creation of reserves is important, since previously they were created only at the intermediate and highest elements of branch administration, but not at the basic production element.

From the standpoint of accelerating scientific and technological progress, it is important to place at the disposal of enterprises and associations a part of the unified fund for the development of science and technology. Previously this fund was created only at the disposal of the ministries.

The CPSU Central Committee and USSR Council of Ministers Decree No. 669 of 12 Jul 85 envisioned yet another rule, important for financing measures in the area of scientific and technological progress. This pertains to granting enterprises and associations the rights to redistribute monies of the production development fund and a part of the unified fund for the development of science and technology, which are at their disposal. These funds are similar in thrust, in that more extensive opportunities are created to maneuver them under the new management conditions.

Strengthening the influence of the economic mechanism on the acceleration of scientific and technological progress is a most important task, which must be solved with the aid of the new management methods, for which important measures in the area of planning have been provided. It is characteristic that, whereas previously the planning of economic production activity and scientific and technological developments was implemented separately, now the creation of a single procedure for planning these types of activity is envisioned. The provision that scientific and technological developments must

be taken into account when summing up the results of fulfilling the plan for production and sales and included in overall fulfillment of the sales plan is very important. In this way activity in the field of scientific and technological progress is essentially merged with economic production activity, which is entirely justified, since under modern conditions the creation and introduction of new equipment is an integral element of normal economic production activity.

CPSU Central Committee and USSR Council of Ministers Decree No 669 of 12 July 1985 directs attention to the need to observe strictly the established procedure and rights of enterprises and associations in the area of planning, and be guided by the envisioned system of directive plan indicies. The question of plan indicies is determining in the establishment of the authority of enterprises and associations in the planning field. Legislative establishment of a system of directive indicies means, essentially, limiting the competence of enterprises and associations in the planning field, on the one hand, and of the higher organs of economic leadership on the other. The higher economic organs plan the directive indicies and all other indicies are recognized as estimative and must be determined by the enterprises and associations themselves. The instruction on the requirement to give enterprises only a minimum number of estimative indicies merits attention. At the same time, estimative indicies given to the production element by higher organs differ little in practice from directive indicies and are also viewed as mandatory. Therefore, it is believed that in the future it would be appropriate to do away entirely with giving enterprises and associations any indicies, other than those related to directives.

This is especially important, because until now a tendency toward excessive regulation in the area of planning has existed. This practice is even applicable in the activity of ministries which have shifted to new economic conditions. Thus, the Ministry of the Electronics Industry, in determining the planning procedure under the new conditions, instructed that enterprises and associations must coordinate all plan indicies with local organs when preparing draft plans. However, such coordination should occur only with respect to increasing the number of workers, when it is necessary to coordinate the question with local organs which know the demographic situation and the status of labor resources in the territory. Therefore, if it is truly necessary to coordinate other plan indicies, it is necessary to define clearly and precisely in legislation precisely what indicies, and under what conditions they must be coordinated with local organs. The thrust of the new economic methods toward expanding the authority of enterprises and associations in the area of planning should also be taken into account. A decree of 12 July 1985 directly provided for expanding the authority of enterprises and associations in the area of planning redesign and technological retooling of production, and granted them authority not only to develop, but also to approve corresponding normative technical documentation and title lists up to an amount of 4 million rubles for heavy industry and 2.5 million rubles for other industrial branches. Such expansion of the authority of enterprises and associations will help better solve tasks of technical retooling of production.

The authority of the primary production element in the field of price formation is being expanded. Enterprises and associations are being granted the authority when coordinating with client enterprises to establish prices for especially popular goods and for small batches of new machinery and equipment. It is authorized when selling products on commission to use reduced prices on goods within limits of up to 50 percent. The development of agreed prices corresponds to the overall tendency toward expanding the economic authority of enterprises and associations and giving them flexibility in selling products, and it helps accelerate the introduction of new equipment, which frequently was retarded unnecessarily by the complicated price approval procedure.

Under the new management conditions the role of the economic contract in planning the activity of enterprises and associations is increasing. The economic contract under present conditions should be used as a planning instrument and a means for the formation of product manufacture and sales plans. This function for the economic contract is explained by the fact that even under the most rigid system of planning not everything is defined in the planned target, but only the main indices of economic activity, based on which more detailed indices are established by the enterprises and associations themselves. They serve not only as the objects, but also the subjects of planning, and if the interests of consumers are affected, planning must be carried out in accordance with them, by the conclusion of economic contracts which define the detailed assortment, products list and delivery time for products, and other conditions of economic production activity.

However, despite the development of this function, the contract has still not taken its appropriate place in economic practice. Many legislative provisions which provide for increasing the role of the economic contract remain unrealized. Thus, in accordance with Point 4 of the CPSU Central Committee and USSR Council of Ministers Decree No 695 of 12 July 1979, indices of the products list and assortment of products being manufactured must be defined in the annual plans of enterprises and production associations in accordance with contracts which have been concluded. However, this provision has not been implemented, since a procedure exists in accordance with which first the plan is approved and then economic contracts are concluded based on this plan. Thus, serious difficulties arise for recording in the plan the products list and assortment which have been coordinated with consumers.

Here the absence of unified legal regulation of planning and contractual relations has a telling effect. Meanwhile, only a unified approach to the plan and contract and interpretation of the economic contract as a special type of plan document, an integral element of the planning process, can a real increase in the role of the economic contract be provided. Therefore, under present conditions, when it is envisioned that preliminary production indices in physical terms and required material resources will be made known to enterprises and associations in advance, it would be useful in accordance with the preliminary targets to conclude economic contracts, and then, based on them, to approve the enterprise and association plans. Of course, to apply this procedure it is necessary that preliminary targets for the next year reach the enterprises not in August-September, but in May-June. The proposed system would make it possible to include the economic contract in the planning

process and to use it to determine the conditions of economic activity in order to satisfy the needs of the economy and population.

Particular attention should be paid to increasing the role of physical indicies defined in the economic contract. At present, despite the theoretical rejection of the notorious "stress on gross output" [val], it remains just the same. Enterprises and associations planning the product list and assortment are fettered by cost indicies of production volume and in a number of cases cannot meet the needs of clients, in particular those of trade organizations, which require that production and delivery contracts define consumer goods which are inexpensive and in popular demand. In order to fulfill production volume in value terms enterprises insist on including in contracts deliveries of more costly goods, even though they are not in demand, which in the end leads to the overstocking of trade organizations and the expenditure of material resources which could have been used effectively in the interest of society, based on a contractually established products list and assortment. It is also useful to reject the existing statutes, under which industrial enterprises may independently change their plans for the production of consumer goods at the request of trading organizations, only while observing production volume in value terms. This again leads to a situation in which the main concern of enterprises is directed toward fulfilling the value indicies of the plan, to the detriment of the real needs of the population for particular goods.

Also important is the development of wholesale trade by several means of production. This task has long been necessary and it is rightly linked with the development of cost accounting relationships in the activity of supply and marketing organizations. Wholesale trade in individual means of production can be levied on the territorial organs of USSR Gosznab, which would help better provide enterprises and associations with necessary material resources.

All of this would help really increase the role of the economic contract in determining production conditions and developing cost accounting in the activity of enterprises, associations and their elements. It is characteristic that Decree No 669 of 12 July 1985 discusses specifically the need to develop intra-production cost accounting and create large, comprehensive cost accounting brigades. This also necessitates improving the legal regulation of intra-organizational cost accounting relations. At present, even in the work of construction brigades operating based on brigade contracts, the conditions of relations between the brigade and the enterprise as a whole and their mutual responsibility for the results of their activity are insufficiently clear. This concerns the organization of intra-organizational cost accounting relations in general, which must be precisely regulated by statutes developed and approved by enterprises and associations. The development of such statutes and definition within them of the rights, duties and responsibilities of internal elements for the results of economic activity is a task which must be accomplished in order to implement successfully the new management methods.

Responsibility for the results of economic activity is today taking on special importance. This involves not only property liability in its traditional form -- payment of fines and compensation of losses for violations of economic

commitments -- but most of all involves economic responsibility, consisting of reducing incentive funds and workers' bonuses for poor results of economic activity. Special attention is being paid to this now, in particular as it applies to product quality. Although high fines are provided for in legislation for the delivery of inappropriate or poor quality products, this is, nevertheless, insufficient to have a real impact on labor collectives.

At the same time, the main function of liability in this sphere is to stimulate appropriate economic activity. The incentive function of liability is expressed in that labor collectives, knowing the inevitability of unfavorable consequences for violation of established procedure, will strive for precise fulfillment of their economic commitments.

It is important to establish a procedure in accordance with which when reductions in wholesale prices are applied, which are related to the manufacture of products not of the highest quality category, corresponding payments into the state budget must occur within limits of up to 70 percent, directly from the material incentive fund of enterprises and associations, with the use of up to 20 percent of this fund for these purposes. Similarly, when products of inappropriate quality are delivered, not only are the established fines paid, but the material incentive fund must be reduced in an amount of five percent for each percent of the product of inadequate quality delivered, with the same limit on the amount that the fund may be reduced. Introduction of these regulations substantially reinforces economic liability for production and delivery of appropriate quality products.

At the same time, it would be incorrect to underestimate the use of fines. This liability has not only an incentive, but also a compensatory function, in that enterprises and associations which suffered as a result of violations of economic commitments by their contracting partners may cover their losses through sums recovered from the guilty contractor. In this regard, strengthening liability in the case of deliveries of sets of major assemblies, produced by many enterprises, is very important. Whereas until recently in such cases the subcontracting supplier enterprises which fail to deliver sub-assemblies and parts for equipment sets had to pay fines, calculated as a percentage of the value of the undelivered part, today liability in an amount of five percent of the value of the entire aggregate is provided for. This means increasing the fines on those guilty of violating commitments and at the same time eases the situation of the main suppliers, which previously could extract from subcontractors only small fines, since the value of the sub-assemblies and parts in the sets was often insignificant, although without them it was impossible to deliver the entire aggregate, for which the main supplier paid a large fine to the client. Before the introduction of the new procedure the main supplier, needless to say, could recover losses from the sub-supplier, but this was very difficult. Later, recovery of fines was made automatic when the violator of a commitment was found to be at fault.

There are still significant shortcomings in questions of liability in economic relations, which prevent the successful introduction of the new management methods. We still have economic branches whose liability is unjustifiably low; most of all transport and power supply organizations. The responsibility of construction enterprises has also declined, and they do not answer at all

for low quality construction production. It seems to me that under conditions of the development of full cost accounting the liability of enterprises in all economic branches should be total and equal. Therefore, limitations on liability should be rejected and it should be established in equal measure for organizations in all economic branches. Today the liability of economic leadership organs is especially growing. It is known that ministries frequently give instructions to enterprises about priority shipment of goods to certain consumers and about the delivery of products to other organizations in their system. Enterprises fulfill these instructions and then pay fines for violating commitments under previously concluded contracts or for unauthorized delivery of products. The enterprises experience substantial material damage, although the real guilty party for what happened, the economic leadership organ which gave the instruction, remains unaffected. This undermines enterprise cost accounting and does not correspond to the new management conditions.

Frequently, enterprises and associations have financial losses when their plans are changed. And when this happens the ministries have not been required to reimburse them, despite the fact these organs possess financial reserves, the main purpose of which is precisely to reimburse such losses. However, the ministries can, but are not required to grant funds for this to enterprises and associations. It seems to me that we must talk not in terms of the capability, but about the obligation of ministries to answer for the unfavorable consequences of incorrect management decisions. It is necessary to establish a duty on the part of ministries and other higher economic organs to reimburse losses of enterprises and associations which arise as a result of their incorrect managerial actions.

At the same time, it is necessary to note that such a proposal often runs up against lack of understanding on the part of some economic leaders, who are accustomed to traditional methods of work. This occurs even when the new management methods are introduced. Thus, CPSU Central Committee and USSR Council of Ministers Decree No 659 of 14 July 1983 provides that, in the case of a temporary worsening of the work indices of enterprises and associations during the period of mass assimilation of new, highly effective equipment, reduction of their wages and material incentive fund must be compensated for through central funds and reserves of the ministry. However, in the departmental documents published in Minelektrotekhprom [Ministry of the Electrical Equipment Industry] and Mintyazhmash [Ministry of Heavy and Transport Machine Building], it is provided that ministries are not required, but merely authorized to reimburse shortages of funds. Thus, the authority of enterprises and associations to require reimbursement for these funds became an opportunity to request it of the ministry.

In order to ensure legality in economic administration and planning and to prevent violations of the rights of enterprises and associations under the new management conditions, it is necessary to work out a legal mechanism for ensuring and restoring violated economic rights. Upon introducing the new management methods and when normative methodological documents are being worked out in ministries and departments, it is necessary to verify not only their economic justification, but also their legality. Such verification must

eliminate the possibility of law violations and of limitations of the rights of enterprises and associations.

At the same time, ensuring the legality of economic administration and planning is also important when solving management issues which are not directly related to the introduction of the new methods. In these cases it is necessary to expand the functions of state arbitration to verify the legality of economic administrative and planning documents. In accordance with the 1979 Law on State Arbitration, arbitration today as well has the functions of verifying the legality of documents by state administrative organs. In examining economic disputes, state arbitration must refuse demands which are based on documents by state administrative organs which run counter to the law. But these functions of state arbitration are limited by the field in which economic disputes are resolved, and arbitration does not recognize a document as invalid and contrary to law, but merely does not apply it in a specific instance.

It seems to me that the functions of state arbitration should be expanded. They should not be limited merely to the field of examining economic disputes. It is necessary to assign to state arbitration wider control over the legality of economic planning and administrative documents, and grant it the authority not only to not apply, but also to recognize as invalid economic administrative and planning documents which contradict the law.

Carrying out these measures will help strengthen law and order in economic relations and will facilitate the effective use of legal means to improve the management mechanism and raise the effectiveness of social production.

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ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

ENTERPRISE INDEPENDENCE: GOAL OF ECONOMIC RESTRUCTURING

Moscow IZVESTIYA in Russian 13 Mar 86 p 2

[Article by A. Sadikov, candidate of economic sciences, Moscow, under rubric "Cost-Accountability Account": "Plan and Interest: Independence of Enterprises, Their Responsibility for the Final Results Are One of the Basic Areas for the Reorganization of the Economic Mechanism Which Was Planned by the 27th CPSU Congress"]

[Text] First of all, let us cite facts. They are well known today to our economic managers, and many of them have been mentioned at the party congress.

During 1985 at the Sumi Machine-Building Scientific-Production Association imeni M. V. Frunze, profit increased by more than 33 percent, and labor productivity by slightly less than 14 percent. At Trust No. 18 of Mosobltselstroy, labor productivity during the past year increased by more than 20 percent, the expenditures per million rubles of construction and installation operations were reduced by 13 percent, and the number of ITR [engineer-technical workers] by 28 percent.

Labor productivity in a number of combined technological flow lines in the construction of pipelines is 1.8-2 times higher than with the traditional organization of the labor. Moreover, the indicators for all of Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises] look different from those for construction as a whole: the assignment in the five-year plan for increase in labor productivity was fulfilled in three years. In 1985 on the Belorussian Railroad approximately 12,000 persons were freed for other branches.

During 1985 on the Kolkhoz imeni Lenin, Kursk Oblast, the production of output per 100 hectares of plowland, as compared with the previous years, increased by 29 percent, and simultaneously there was a reduction in the production costs. But on the Put K Kommunizmu Kolkhoz, Altay Kray, during the past three years the volume of agricultural production increased by 58 percent, the return on investments increased by 55 percent, and the production costs dropped by 33 percent (we should note the exceptional importance of all three indicators).

The working out of the draft of the construction base for the water channel at Construction-Planning Institute No. 2 of USSR Gosstroy was fulfilled at a rate that was 6 times faster than the existing norms, with a saving of one-third of the wage fund. The brigades at the Elektron Association for the Repair of Radio and Television Apparatus, in Tallinn, used to repair a television receiver in two weeks, but now the longest period of time is three days, and most frequently it is simply in the course of a single day, with the delivery of the repaired set to the person's home.

Why did all these metamorphoses occur?

Despite the obvious differences in the branches to which they belong, and in the technological schemes, scope, availability of funds, organization, etc., all the mentioned collectives are united by a single characteristic. They are working on a complete cost-accountability basis (or under conditions that are close to such). It is precisely the principles of cost accountability that create a firm alloy of plan and interest. That is, interest in accepting as intensive a plan as possible and fulfilling it with the smallest possible expenditures. This, then, is the principle that unites the collective of many thousands of Sumi machine-builders and the combined brigade at the Estonian personal-services system, the Altay kolkhoz members and the gas pipeline builders at Urengoy.

There is yet another extremely important detail in common: the people who have found themselves in new conditions are by no means inclined to consider their possibilities to be exhausted.

One asks the question: if this is the opinion of those who are working strenuously, what reserves exist where things have been proceeding, so to speak, without that special spark of enthusiasm? Every kind of analogy is risky, but I cannot restrain myself from comparing these reserves with the energy that is concealed within the atom. The use of these colossal reserves today enriches us no less than we were enriched at one time by the resolution of the atomic problem.

Why, then, have the tremendous internal possibilities for the increase in production that are available to every collective not yet been taken into consideration in full measure when developing the plan? Every economic manager can answer that question easily. The unreliability in the system of economic ties, including in supply; additional assignments; the practice of planning "from what has been achieved"; the unreimbursable intrabranh redistribution of resources; the dependence of the wage fund upon the table of organization that has developed and, once again, upon the percentage fulfillment of the plan -- those constitute an incomplete list of the factors contributing to a reduction if the plan drafts being worked out "from the bottom up."

The intensification of planning regulation most frequently was a response reaction to the striving by the enterprise to overestimate the requisitions for resources despite the modest growth of the planned results. Thus, the interest in increasing the planned number of workers gave rise to the

confirmation of limits on the number of employees. Overestimation of the planned expenditures of raw and other materials, fuel, and energy led to the directive planning of the limit for material expenditures per ruble of commercial output, to the approval of the production costs. The unsatisfactory quality of output brought to life the indicator of the percentage of the output with the highest category of quality in the overall volume of production. The surplus of manual labor being employed is the assignment for the reduction of the application of manual labor. For the more complete satisfaction of the needs, there has been an increase in the number of planned products-list items; for the acceleration of scientific-technical progress, the most capricious indicators of the technical level of production, the economic benefit, etc., were approved.

At the present time the practice of management has proven most convincingly that the only persons who are capable of a thorough study of the needs for output are the consumers themselves. In our economy there are tens of thousands of economic organizations, a population of more than 278 million persons, and every person has his own needs, the most complete satisfaction of which is, in the final analysis, the goal of production.

"Economic administration -- and this is obvious -- requires constant improvement," was the statement emphasized at the 27th CPSU Congress. "But at the present time the situation is such that we cannot limit ourselves to a partial improvement. We need a radical reform."

Actually, the rich content of socialist property includes within itself a multifaceted system of relations, an entire range of economic interests. This complex system of relations requires a definite combination and constant regulation.

As was noted at the party congress, Gosplan and other planning agencies have been called upon to reflect in their decisions the needs of society as a single whole, and to regulate the most important proportions in the national economy. As for the guaranteeing of the demand for a specific variety of articles, the task here consists in intensifying the effect exerted by the consumers upon the formation of the producers' plans, upon the technical level and quality of output.

We need first of all a mechanism for orienting the enterprises toward the production of what is actually necessary -- and no other kind of output. And yet today the notorious shortage of certain material-commodity values coexists peacefully with an obvious excess of others. In the past five-year plan the growth rates for reserves considerably outstripped the growth rates for volume of production. It would be oversimplification to feel that the items that are a drag on the market accumulate chiefly as a result of the violation of planning and contract discipline, or disruptions in deliveries. The entire system of economic levers, incentives, and measures of responsibility exerts an effect upon what is being produced, and how it is being produced.

There has been a long and traditional, although scarcely efficient, path by which the consumer enterprise makes a requisition: through "its own" ministry; the territorial and branch main administrations of Gossnab; the manufacturer

ministry; Gosplan; then back to the manufacturer ministry. From it (in the form of a production plan) and from Soyuzglavnabsbyt in the form of a production order, a message is finally sent to the supplier enterprise. As a result, completely irreplaceable time is lost. For example, if the need for something arises in the second half of 1986, the requisition cannot be sent on its long path until the beginning of 1987, and no one can count on receiving the desired output until 1988. In addition there is no definiteness relative to the degree to which the need will be satisfied (therefore the process of accumulation of requisitions from the enterprises, which process precedes the formation of the plan for material-technical supply, is similar to the formation of an avalanche in the mountains).

If, for example, we were dealing with the creation of an experimental model, then in order to transfer it into series production it will take, for the very same reasons, two more years. So the five-year plan is already left behind. It is necessary also to add in the amount of time required even earlier at the stage of the research and design operations for various coordinating operations. Thus, at the Elektrosila Association in Leningrad, it has been computed that simply by means of the intelligence simplification of the rules of development, and especially the coordinations of the technical assignments and specifications, and the turning over of them to the interdepartmental commission, the period of time required for the creation of new machines can be reduced by 2-2.5 years.

It is only the increase in the role of the direct ties, the economic contracts and -- no less importantly -- the accelerated development of wholesale trade that will create the forms for the interaction among the partner which are adequate to the needs of scientific-technical progress. But it is inadmissible to reduce wholesale trade to the sale of a "handful of rails." It will be most effective if it encompasses a noticeable share of the producer goods and, in the long-term period, becomes a completely equal link in the system of administration of the economic ties. It is frequently felt that the changeover to wholesale trade will be possible only after the national economy has been saturated with the necessary output. But what remains in the shadows is the powerful reverse influence of the progressive forms of economic ties upon the process of eliminating the shortage, of increasing the balance between supply and demand with regard to a specific variety of output, rather than only on the basis of general, depersonalized volumes. But even that is not the chief factor.

The second and decisive aspect in the problem lies in how complete the cost accountability is. Today it is the supplier, rather than the consumer, who dominates. However, the time during the course of which this can continue is expiring. Economic laws are implacable. Enterprises that are the consumers of output will dictate their will with ever-increasing firmness. But is this good for the customer who pays for all this out of his pocket? Then it will become more understandable to every worker that the enterprise will succeed in having a completely sound wage fund and fund for social and production development only if there is an active search for production orders at the planning stage and if the plan includes the minimally admissible expenditures for their fulfillment.

An antiexpenditure economic mechanism would be inconceivable without assuring that all the expenses of the labor collective are covered by their own earned funds. That conclusion was made by the party congress, and it is difficult to overestimate its importance.

It is probably necessary to speak in more details about "their own funds." According to form, the difference between the funds of society (budget, centralized funds of ministries and departments) and the funds of enterprises is obvious. But in essence? In essence, that is, materially, the labor collective and its managers still have an insufficient sense of that difference. The value that is being created at the enterprise is distributed in such a way that the size of "their own funds," practically speaking, does not depend upon their contribution to the national income. At the stage of planning the expenditures, the basic struggle deals with the budgetary and ministerial appropriations, and, most importantly, with their material support, especially for scarce articles.

With all the differences in the methods being practiced for distributing income, the figure that depends upon the final result of the labor, that is, the residual figure, in essence is society's share, rather than the collective's. For the time being, an exception exists for only a few instances of deepened economic experiments, some of which, in the form of examples, were cited above. All the mentioned searches, although in various degree, are united by the common tendency of approximation to the principle: material incentive for everyone (both the person and the collection) in proportion to what he gives back to society.

The time has come when it is necessary, even before the development of the plan and irrespective of it, to approve legislatively stable standards for the distribution of income from the sale of output according to the basic directions in the use of that income. Within definite limits, labor collectives can be granted the right to redistribute the funds among those directions within the confines of the share guaranteed to them. For example, between production development and social development. The better arrangement of everyday living conditions, and social and cultural measures, can exert an influence upon economic effectiveness no less than investments directly into the production sphere. In addition, people's living and working conditions represent, for our society, an independent value. It is important only for us to observe the starting up of the action of such a strict controller of the gauge of labor and the gauge of consumption that the principle of the ability to pay one's own way is.

The integrity of the system of administering the economy will largely depend upon how consistently the enterprises and associations -- rather than the state -- begin to be responsible for the fact that they are not operating at a loss. When converting associations and enterprises to complete cost accountability, taking into consideration the branch peculiarities, it is important not to allow any unsubstantiated infringement upon the single principle -- the self-financing of the entire reproduction, including the payment of labor, capital investments, and other elements of the expenditures.

The implementation of the congress decisions concerning the improvement of the economic mechanism requires the reorganization of the legal support of the economy, which support currently includes tens of thousands simply of departmental normative acts. The limitations and the most detailed regulations arose not from good life. But as they multiplied and accumulated, they complicated that life even more. Even the enterprises that have been converted to cost accountability are continuing to experience limitations. An example is the Sumi Machine-Building Association imeni M. V. Frunze. A tremendous amount of attention has been devoted to the deepened economic experiment that is being conducted there, and its results were mentioned at the party congress. The famous collective produces high-grade, competitive output and for 18 years it has been recognized as the best one in chemical machine-building. But even for that collective a mass of indicators for which there is no need is still being planned. The plan for new technology and the financial plan are overloaded, excessively detailed GOST's [All-Union State Standards] are in operation, regulating the stages and endless coordinations when creating new technology. There is no independence sufficient to use a noticeable part of the funds that have been earned. One can only assume what a favorable effect would result from the abolition of these limitations, carried out to supplement the new management methods that the Sumi machine-builders are testing.

It is necessary to give the basic link in production -- the enterprises and associations -- legal guarantees for their economic independence. It is difficult to speak about the actual expansion of the rights of the associations and enterprises while preserving obsolete instruction manuals that hinder the efficient use of the resources and retard acceleration. The laws must prescribe not what the economic managers can do, but what they must not do. Everything else should be left to the discretion of the organizations operating under cost accountability, for their resolution of their statutory tasks.

Real cost accountability, supplemented by socialist self-administration, has an invaluable moral aspect. Good work becomes an advantage. A conscientious person feels that he is the boss in production. Money is no longer an incentive for those who "know how to live," but, rather, serves as remuneration for those who know how to work. The ruble becomes a gauge of economic and social justice.

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ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

ABALKIN ON ACCELERATION, PRODUCTION RELATIONS

Importance of Social Development Stressed

Moscow PLANOVYE KHOZYAYSTVO in Russian No 3, Mar 86 pp 9-16

[Article by L. Abalkin, corresponding member of the USSR Academy of Sciences: "Acceleration of Socioeconomic Development: Its Nature and Sources"]

[Text] The 27th CPSU Congress, developing Marxist-Leninist theory creatively and taking present-day domestic and international conditions into account, has set new targets for Soviet society to achieve in the economic, social, and political domains and in the life of the spirit. Achievement of those targets will make it possible to fully reveal the historic advantages and immense constructive capabilities of the socialist system and its humanistic essence.

The strategy that leads toward the goals that have been set is to speed up the country's socioeconomic development. The package of measures called upon to achieve this does not represent a temporary drive nor a maneuver. It embodies the party's strategic course, which is directed toward qualitative transformation of all aspects of the life of Soviet society. The fundamental principles of the strategy of acceleration have been elaborated and stated specifically in the Basic Directions for the Economic and Social Development of the USSR Over the Period 1986-1990 and up to the Year 2000.

Acceleration of the country's socioeconomic development is a complicated and ramified process. It is inseparably bound up with a fundamental renewal of plant and equipment based on application of the most recent advances of the scientific-technical revolution, with conversion of the economy to the intensive strategy of development, and with improvement of production relations and the system of planned management. Its accomplishment presupposes invigoration of the entire system of political, social, and ideological institutions and development of the creative initiative of the masses.

That is why the problem of acceleration cannot be oversimplified and treated one-sidedly. There needs to be a clear understanding of its complexity and scale and of its multilevel nature. Only with this approach is it possible to correctly reveal the nature of the strategy of accelerating the country's socioeconomic development, the comprehensive nature of that strategy, and the place and role of each of its elements.

The need to overcome the adverse processes noted at the end of the seventies and the beginning of the eighties and to raise growth rates should be put in first place in such an analysis. Acceleration of social progress and low rates are incompatible with one another. Even the targets outlined for the 12th Five-Year Plan in the domain of socioeconomic development are higher than the actual results obtained in the 11th Five-Year Plan (growth in percentage):

<u>Indicator</u>	<u>1981-1985</u>	<u>1986-1990</u>
National income used for consumption and accumulation	17	19-22
Industrial output	20	21-24
Agricultural output (average annual)	6	14-16
Per capita real income	11	13-15

Still higher growth rates have been envisaged for the subsequent two 5-year planning periods (the 13th and 14th) on the basis of the preparation that would be made in the meantime and the restructuring of the economy. Here we need to take into account that as the scale of the economy grows, the absolute size of each percentage point of growth increases substantially.

It is normal for economic growth under socialism to take place at stable and high rates. It is growth that guarantees uninterrupted social progress and successful solution of the increasingly complicated and ever larger social problems.

That is why the paramount task is to ensure the transition from low and also very unstable growth rates that have occurred in the recent past to the pattern of dynamic economic behavior inherent in socialism. And at the same time, and this is no less complicated, the economy has to be converted to the strategy of intensive development, and a new quality of its economic growth achieved.

The Political Report of the CPSU Central Committee to the 27th Congress emphasized that the party is primarily referring to raising rates of economic growth when it refers to acceleration of socioeconomic development. Mainly, but not exclusively. Its essence lies in the new quality of growth: intensification of production in its every aspect on the basis of scientific-technical progress, restructuring of the economy, effective forms of management, of the organization of work, and of work incentives, and in the conduct of a vigorous social welfare policy.

The need for the transition to a new quality of growth no longer allows us to talk about rates "in general terms." Exactly which rates are to be accelerated and what price is to be paid for the economic growth itself have to be specifically stated.

Such an analysis should begin with the dynamic behavior of the production of means of production. In the context of comprehensive intensification and consistent conduct of the policy of resource conservation the output of products in the raw materials and energy group will grow at low rates or will in

general stabilize. For instance, the doubling of the national income by the year 2000 will be accompanied by a nearly 30-percent drop in specific energy consumption and a nearly 50-percent drop in specific metal consumption. The targets for the output of finished rolled products outlined for the 12th Five-Year Plan must be achieved without increasing the production of pig iron and with a substantial reduction of coke consumption.

The production of the instruments of labor is characterized by a different dynamic pattern. A new technical reconstruction of the economy requires faster development of machinebuilding, above all those of its branches which are the catalysts of scientific-technical progress. In the 12th Five-Year Plan the output of machinebuilding and metal manufacturing is to increase by 40-45 percent, as compared to 21-24 percent for industry as a whole. At the same time, the output of the products of machine tool building, instrumentmaking, the electrical equipment industry, and the electronics industry, along with the output of computer equipment will increase at rates exceeding by 1.3-1.6-fold the growth of machinebuilding as a whole. But even here the main thing is the quality and the technical level of the product produced.

In the present stage it is normal for the social orientation of economic growth to become more important. This presupposes faster development for those branches and production operations that account for the achievement of high end results for the national economy and fuller satisfaction of the needs of the public. The faster growth of the output of consumer goods outlined for the 12th Five-Year Plan is a specific expression of that: The output of Group "B" is to increase 22-25 percent, and that of Group "A" 20-23 percent.

But even here everything is not simple and unambiguous. As the need for many goods which have been produced traditionally is saturated, their output will inevitably grow at slower rates. For example, today the Soviet Union is producing more leather footwear than its total output in the United States, West Germany, Great Britain, and France taken together. The supply of television sets relative to population (per 100 families) increased from 8 in 1960 to 96 in 1984 and that of refrigerators and freezers from 4 to 91 over the same period. It is clear that the dynamic behavior of production will vary with the initial saturation of needs and with attainment of a level close to the scientifically sound rates of consumption.

Under the altered new conditions the emphasis is being shifted to product quality, to rapid product renewal, and to expansion of the assortment and composition of the consumer goods produced.

All of the processes we have referred to are also reflected in the summary indicators of the rates of economic growth, above all the indicators of the growth of output of industrial products. Yet these changes do not depend on the way in which output is measured: whether it be gross output, marketable output, sales, or net output. The rates themselves are subject to the influence of two groups of factors operating in opposite directions and tending in the one case to raise the rates and in the other to lower them. These factors, which tend to cancel one another out, are ultimately making it necessary to achieve uniform and stable economic development.

As the slowing down of the growth rates that has occurred in the recent past is overcome, the patterns inherent in the new quality or type of economic growth will figure more manifestly. That growth will be based on the intensive form of expanded socialist reproduction, which is typified by a qualitatively different approach to assessment of the dynamic behavior of economic and social processes.

"The essence of the changes," M.S. Gorbachev pointed out in his address at the 27th congress, "lies in shifting the center of attention from quantitative indicators to quality and efficiency, from the intermediate results to the end results." Accordingly, the qualitative aspects of expanded reproduction are becoming far more important.

Rates reflecting the rise of the productivity of social labor and an increase in production efficiency are taking on priority importance. Plans call for raising the level of labor productivity 2.3-2.5-fold by the year 2000. We have not had such growth rates over the last 15 years. For instance, the average annual rise of the productivity of social labor was 4.6 percent over the period 1971-1975, 3.2 percent over the period 1976-1980, and 3.1 percent over the period 1981-1985. It is to be 5.7-6.3 percent over the period from 1986 to the year 2000.

Even during the 12th Five-Year Plan a watershed is to be crossed in the intensification of production, the entire growth of the national income, of industrial and agricultural output, of the volume of traffic in rail transportation and of work done in construction is to be achieved by raising labor productivity. This is the new quality of economic growth.

New and untraditional aspects of the acceleration of economic and social development are bound up with it. They reflect the growing dynamism of present-day production and the growing impact which revolutionary changes in science and technology is having on its development. Acceleration today is characterized above all by the rate at which production reacts to the new scientific-technical solutions which spring up and to changes in the needs of society. More specifically, the dynamism of present-day production is manifested in its structural reorganization, in its rapid forward movement in strategically important directions, in accelerated renewal of capital assets, and in the rapid change of the assortment of products produced.

This imposes the necessity for essential changes in structural and investment policy. Emphasis is being put on the retooling of production. That is why it is important to renounce the stereotype of economic management that took shape in the past, whereby new construction was considered the principal method of developing production, while at the same time many existing enterprises were not retooled over a long period of time.

The bulk of the new machines and equipment produced will be committed not to expanding the existing stock of equipment, but to updating and rejuvenating that stock. How will this be reflected in the growth rates of fixed productive capital? They slow down. Nevertheless, an acceleration of economic development will occur, but not in the extensive pattern (in the form of a

growth of the value of capital assets), but after the intensive pattern. Even during the 12th Five-Year Plan the renewal of plant and equipment is to be speeded up, above all through more rapid replacement of equipment with low efficiency by progressive equipment with high productivity. The size of the retirement of outdated fixed productive capital will at least double over the 11th Five-Year Plan.

Renewal of assortment and radical improvement of product quality are becoming one of the most important requirements in development of the production of consumer goods as well. The Basic Directions...include among the key tasks that of manufacturing and selling consumer goods in an assortment that meets the demand of various groups of the population. Product quality is to be substantially improved, and the technical and esthetic levels and operating reliability of the product are to be increased.

On the whole the problem of radical improvement of product quality occupies one of the central places in the program for acceleration of the country's socioeconomic development that the party has elaborated. The fight for quality is not a temporary drive. As emphasized in the new version of the CPSU Program, the comprehensive rise in the technical level and quality of the product will always be at the center of economic policy. The Soviet product must embody recent achievements of scientific thought, must meet the highest technical-and-economic, esthetic, and other consumer requirements, and must be competitive on the world market. Improving its quality is a reliable way of satisfying more fully the country's needs for necessary articles and the growing demand of the population for a variety of goods. Low quality, rejects represent a waste of physical resources and the labor of the people. The party will vigorously support the fight for the prestige of the Soviet label. Product quality must be a matter of professional and patriotic pride.

The course toward renewal and toward improvement of quality is involved not only with purely economic processes, but also with many social processes. In the context of achieving economic growth without increasing the size of the labor force far higher requirements are imposed on the quality of the training of specialists and workers in the common occupations. The correspondence between the knowledge and skill acquired and the needs of present-day production, creation of conditions for rapid renewal of that knowledge and skill, and the responsive restructuring of the labor supply are becoming a most important prerequisite for speeding up scientific-technical and socioeconomic progress.

In the context of the intensive form of expanded reproduction one of the most important indicators of acceleration will be reducing the turnover time of resources in the economy. The task of guaranteeing construction and activation of projects within the allowed periods of time has been set in order to increase the efficiency of capital investments in the 12th Five-Year Plan. Plans call for substantially reducing the number of projects under construction at the same time, for bringing the amount of partial completion and unfinished construction up to the allowed level, and for substantially reducing stocks of uninstalled equipment.

A very large potential for time-saving lies in speeding up the rate of turnover of working capital. The 12th Five-Year Plan specifically calls for developing and improving a nationwide system of material and technical supply, direct and long-term business relations between suppliers and consumers, and wholesale trade in supplies and equipment in order to speed up the turnover of the resources of the economy.

The course aimed at acceleration which has been elaborated by the party not only defines the goals and priorities of socioeconomic development, it also envisages a set of interrelated measures to guarantee their achievement. Now that the emphasis is being transferred to organizational work, now that specific deeds and actions by every person and every work collective are required, clarity on the matter of the sources of the acceleration is especially important.

It should be remembered in this connection that the course aimed toward acceleration of socioeconomic development is not an isolated process. This is a most important link and pivot in the effort of the party aimed at qualitative transformation of all aspects of the life of Soviet society. That is why all factors must be "operate" toward acceleration: scientific-technical, organizational and economic, sociopolitical, and finally, spiritual and ethical factors. In other words, the comprehensive improvement of socialism, the further advance of Soviet society toward communism and acceleration of socioeconomic development are inseparable from one another.

At the same time, from the practical standpoint it is advisable to discuss the question of the sources of the acceleration in more specific terms. In this case all their great diversity can be reduced to two basic groups. The first would include everything related to setting things to rights in the economy and to improved use of the existing potential--the immense scale of fixed capital, the resources applied to economic use every year, the labor supply, and the scientific potential.

Raising the level of organization, responsibility, and discipline and combating losses and poor management afford the possibility of mobilizing immense reserves for acceleration. They exist practically everywhere: in any branch in any republic, in any work collective, and probably even at every work station. One only needs to take up the task as a good manager should and to put an end to carelessness and the tolerant attitude toward defects. Only through more efficient organization of work and by eliminating all the various losses of worktime is it possible, as has been shown by calculations, to raise productivity by 10-15 percent or more. Elimination of losses of farm products in all stages of their movement from the point of production to that of final consumption will make it possible to substantially increase (by approximately 20 percent) the available food and raw materials.

It is a paramount task to activate these sources of acceleration, and this is a task that needs to be performed today. Yet the limited nature of these sources needs to be taken into account. The point is that by their nature they are one-time sources. After all losses of worktime, say, have been eliminated, this source (assuming the same equipment, technology, and organization

of work have been retained) will prove to be entirely exhausted. In addition, utilization of the existing potential (for all the importance of this source of the acceleration) is unable to guarantee a radical rise in labor productivity, product quality, and production efficiency.

The need is arising to seek out and activate a second group of sources, first of all, those which represent constant and reproducible sources, and second, those able to ensure a qualitative turnaround in the economy. They in fact occupy the central place in the program for acceleration of the country's socioeconomic development.

Radical acceleration of scientific-technical progress, which the party considers to be the key topic in its economic policy, is moving into first place among them. Here it is especially important to emphasize the following circumstance. Scientific-technical progress has also taken place in previous stages, it has never stopped. But today it does not merely need to be speeded up, but the transition has to be made to its higher forms, which are revolutionary in their character and consequences.

Up until now scientific-technical progress has taken place in most sectors and branches, as emphasized by the April (1985) Plenum of the CPSU Central Committee, in a sluggish way, by evolution, predominantly through improvement of existing technologies and through partial modernization of machines and equipment. These measures have yielded a certain return, but it has been too small. There is a need for revolutionary shifts: for a transition to fundamentally new technological systems and recent generations of equipment affording the highest efficiency. It is a question of retooling all sectors of the economy on the basis of the present-day advances of science and technology.

Machinebuilding faces crucial tasks in this connection. It is called upon to create and put into production new generations of equipment which makes it possible to raise labor productivity many times over and to substantially reduce material costs.

Today it is no longer enough to compare equipment being designed and produced with the equipment that exists, which is a variety of the approach of using the level attained as a reference. In the economy, and especially in the sphere of scientific-technical progress, there is a need to look forward. The criteria for selecting the most effective solutions are inevitably becoming stricter. Meeting the most recent advances of scientific thought and the best world examples is being advanced to first place among them. Meeting these requirements consistently is an indispensable condition of substantial acceleration of economic progress, and that means of social progress as well.

But scientific-technical progress does not take place all by itself, without active human participation. Development of the creative initiative of the masses, shaping a truly stewardly attitude toward work and its fruits, and activation of social factors represent a powerful and inexhaustible source of Soviet society's socioeconomic progress.

There is a considerable untapped potential locked up here. Many managers in the economy, not only at the lower levels, but also at rather high levels, have not been paying very much attention to the problems of social welfare. Guided by the interests of short-term gain, they not uncommonly try to "patch holes" by cutting back appropriations for development of the sphere of social welfare. As a result there is an unjustified tendency toward a reduction in the relative share of expenditures for those purposes, even a reduction in their relative share of the total volume of capital investments. The relative share of outlays for social welfare purposes is shown in the table below.

(Percentage of the total volume of capital investments)

<u>Indicator</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1984</u>
Housing construction	17.5	17.1	15.0	14.0	15.4
Construction of institutions in the fields of science, culture, art, and public education	6.2	5.5	5.2	4.9	4.6

Investments to develop housing construction and expenditures for education and culture do not yield an immediate benefit, which is why they are often treated as "unproductive outlays," although from strategic positions they are the most promising and effective investments aimed at development of society's principal productive force. Activation of the most powerful and long-acting sources of acceleration of the country's socioeconomic development depends to a decisive degree on them.

It is not, of course, just a matter of investments. It is equally important to create the conditions for the masses to become actively involved in the management of production and of all the affairs of society, to organically link up the interests of every worker and of every work collective with the interests of society, the interests of the entire state, whereby every worker would feel himself to be an authentic boss both in his own enterprise and also on the scale of the entire country.

But both the acceleration of scientific-technical progress and activation of the human factor are unthinkable without the appropriate restructuring of social and above all production relations. The party's fundamental approach to these matters, which is based on the fundamental postulates of Marxist-Leninist theory, has been set forth in the new version of the CPSU Program. It points out that the party sees the constant improvement of production relations, maintenance of their stable relationship to the dynamically developing productive forces, and prompt discovery and resolution of nonantagonistic contradictions arising between them as a necessary prerequisite for acceleration of society's socioeconomic progress.

As the experience of history and its conceptualization in theory have shown, the tuning of an economic mechanism that operates efficiently and reliably is the principal factor for maintaining this correspondence and for resolving the contradictions that arise. Improvement of that mechanism, during which correspondence of the forms and methods of economic activity to the changing

conditions of economic development and to the character of the tasks being performed is guaranteed, is yet another important and constantly operative source of acceleration of social progress.

Today there is an urgent need to achieve a substantial rise in the scientific level and effectiveness of planning and to direct it toward utilizing intensive growth factors, toward scientific-technical progress, and toward more complete solution of social problems. The complete and dynamic balance of the economy, including creation of a system of planned reserves, is especially urgent, since only on that basis is it possible to really speed up economic processes. The extensive use of long-term economic standards in planning will make it possible to effectively combine a strengthening of centralistic principles in management and planning with development of the initiative and creativity of work collectives.

Work needs to be continued to create flexible and effective management structures capable of successfully solving intersector problems, of strengthening the bonds between science and production, and of achieving high end results from the standpoint of the national economy. One of the most important tasks in improving management is to master the exceedingly rich organizational potential that lies in more elaborate specialization, in development of consolidation, and in industrial cooperation and applying that potential to speeding up the country's socioeconomic development.

In tuning an economic mechanism that operates flexibly and efficiently the party has been paying particular attention to a set of measures directed toward the efficient operation of the basic economic entity--production enterprises and associations. That kind of attention has been fully justified and normal. It is precisely there, in the basic economic unit, that all the resources and diversity of physical goods are created; it is ultimately there that scientific-technical advances are brought together with production, and it is there that the destiny of intensification of the entire national economy is predetermined. The constructive capabilities of social factors for accelerating economic progress are also manifested within the activity of the work collective.

The party's position on these matters is clear and invariable. It consists of consistent pursuit of the line of broadening in every way the initiative and independence of production enterprises and associations, while at the same time enhancing their responsibility for the quality and end results of economic activity. Enterprises and associations will be gradually converted to full cost accounting (khozraschet), while at the same time the role of economic levers will be strengthened and the number of indicators assigned by higher-level organizations will be reduced. The system of levers and incentives must give preference to work collectives which have been achieving success in speeding up scientific-technical progress, which have been manufacturing better products, and which have been increasing the profitability of production.

Thus the acceleration of the country's socioeconomic development requires the performance of an entire system of measures and taking command both of the relatively immediate and short-term sources of economic growth as well as those which are long-term and strategic. Success here depends on the mutual compatibility and coordination of the measures carried out as well as on the efforts made both at the center and locally.

The orientation toward the long-term and large-scale objectives defined by the party's economic strategy must be combined with the solving of more immediate urgent problems. It is important to adopt a good work rhythm from the very outset of the 12th Five-Year Plan, to bring up the rear, and to prepare to work strenuously. The present 5-year period is expected to be the period in which a turnaround is accomplished along all the lines of the country's economic and social development. And that means that Soviet society's attainment of the qualitatively new targets set by the new version of the CPSU Program will depend in large part on its success.

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Self-Management, Enterprise Praised

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[Article by L.I. Abalkin, corresponding member of the USSR Academy of Sciences: "On the Course Toward Acceleration"]

[Text] The idea of speeding up socioeconomic development runs like a red thread through all the documents of the party congress. This is quite logical and natural. After all, this is not just a striking slogan or a temporary drive. Acceleration is a strategic course. This is natural because principles, approaches, and numerical indicators--and there are quite a few of them when we refer to the long range--cannot be taken all by themselves. They must be examined in the general context of the party's conceptions. Then their profound purport and inner logic become clear.

The new version of the CPSU Program is a document of immense theoretical power and great political energy. It is based on the fundamental postulates of Marxist-Leninist theory, a critical conceptualization of the historical causes of the road that has been traveled and a realistic assessment of the present-day situation. All of its principles have been bound together by a general conception, they complement one another, and in their totality they provide a clear and constructive program for action. It is indeed a program for action, not a summary of promises and desires.

In the most general and concentrated form the task is being set of taking Soviet society to qualitatively new frontiers. Sometimes by ingrained habit when we read political documents we give more attention to the words than to their meaning. This is a hindrance and a distraction. The party program, as emphasized by the Plenum of the CPSU Central Committee held in October 1985, must be free both of excessive detail and of groundless fantasy, as it also must of bookish cleverness and games with words.

What is the main thing in determining those qualitatively new frontiers which Soviet society is to reach? The main thing is that the new version of the program offers a straightforward, scientifically verified, and meaningful description of those frontiers themselves; sketches the outlines in the economic, social, and political spheres and in the life of the spirit which our society is to take on as a result of its achievement. It can be said without fear of exaggeration that we are dealing with a solid enrichment of the doctrine concerning socialist society and concerning the patterns and stages of its development.

In setting the task of planned and comprehensive improvement of socialism the party is not losing sight of its ultimate objective--the building of communism in our country.

Speeding up socioeconomic progress is in fact a strategic course aimed at qualitative transformation of all aspects of the life of Soviet society.

In undertaking a more specific analysis of this problem, we would like to single out some of its aspects. First of all, we need to speak about the dialectics of the integrity and the comprehensiveness of the leading unit. Profound shifts in the economy as the decisive sphere of human activity represent the point of departure of the acceleration. Unless there is an abrupt turnaround toward intensification of production, unless there is a new technical reconstruction of the economy, unless there is a radical rise in labor productivity, further progress in the sociopolitical sphere and in the life of the spirit is unthinkable.

This is elementary Marxism. But that is not by any means all there is to Marxism. As V.I. Lenin stressed, "the materialists (Marxists) were the first socialists to raise the question of the need to analyze not only the economic aspect, but all aspects of the life of society." Historical experience is constantly teaching us the lesson that it is a mistake to trust in the omnipotence of economic factors, that favorable shifts in the economy will not automatically bring about an improvement in the other spheres of life.

But that is not all there is to it. Even within the economy itself it is not possible to achieve favorable results, say, in a substantial rise of labor productivity, without invigoration of sociopolitical institutions, without changing working and living conditions, without an overhauling of social consciousness. This is a characteristic of any complicated and integral system. That is why qualitative shifts in development of the productive forces and production relations are viewed in the new version of the CPSU Program not as an autonomous process, but as a link--even though the leading link--in the process of the improvement of socialism in its every aspect.

This approach is scientifically sound and theoretically correct. It not only embodies precautions against absolutizing any particular measures, its political import is equally important. And precisely the fact that it makes it possible for the workers in any sphere--from municipal services to cultural institutions--to become aware of their place in the overall system, of their involvement with the country's affairs and destiny, of their irreplaceability in the fight for future progress of Soviet society.

The second aspect of the problem of acceleration to which we would like to call attention lies in grasping the need for qualitative and radical transformations. The time in which we live is one of fundamental change. Today it is no longer enough just to work better than yesterday. There has to be a radical technical retooling of the country's plant and equipment, fundamentally new techniques and technology which make work many times more fruitful need to be mastered, and the economy needs to be put on the road of intensive development. The very model of economic growth is undergoing essential change, and its social orientation is becoming stronger.

The spirit of the times, the creative approach to solving the problems raised by reality, an irreconcilable attitude toward any manifestations of the retrograde force of inertia and stereotypes inherited from the past are the distinguishing features of the documents of the party congress. They in fact reflect the revolutionary character of our world view and an imperious command of the times.

Materialist dialectics--the creative soul of Marxism--include in the positive understanding of what exists an understanding of its negation as well, every existing form is regarded in motion and consequently from its transitory aspect as well. "It does not bow down before anything, and it is critical and revolutionary by its very nature," K. Marx wrote.

Among the specific causes and those objective factors which are urgently dictating the indispensable necessity of an acceleration we might single out a few basic ones. Here again first place must be taken by the change of the very conditions of economic and social development. The point is that a lengthy period during which economic growth was based on growing exploitation of traditional natural resources, including additional contingents of work power, and accordingly on the construction of more and more new enterprises, has come to an end or, more accurately, is now coming to an end. This type of growth is moving off into the past. It is being replaced by a different one that is based on qualitative improvement of the factors of production and technical renewal and retooling of production.

Not uncommonly when we encounter serious difficulties and problems in practice we see the tasks of the coming day as simpler and easier than they are. It seems to us that once we have solved the problems of today, work will be easier and simpler. This is a serious illusion. Social progress presupposes a transition from the simpler tasks to those which are more complicated. Even V.I. Lenin gave warning of this when he demanded "an unfailing transition from the easier tasks to the more difficult ones," since "otherwise no progress whatsoever is possible, nor can there be progress in building socialism."

The inevitable increase in the complexity of the tasks of social development demands a qualitative revamping of the system and methods of management, a substantial rise in its scientific level, and the ability to promptly discover and effectively solve new and more complicated problems.

The course adopted toward acceleration of economic and social development is also dictated by the need to overcome adverse developments which became

manifest at the end of the seventies and the beginning of the eighties. There was a sharp slowing down of growth rates, disproportions occurred and became more acute in the economy, and there was a noticeable slackening of discipline and responsibility. Some of the cadres lost the taste for prompt performance of the reforms and innovations which had become necessary and began to display bureaucratic and conservative attitudes and a fear of bold decisions. In a number of regions of the country things like speculation, corruption, and enrichment by other means than work became prevalent.

The vigorous and bold measures carried out on the initiative of the CPSU Central Committee have made it possible to halt the development of those processes. Growth rates have speeded up somewhat. As noted during celebration of the 68th anniversary of the October Revolution, the political atmosphere in the country has been revitalized and its moral atmosphere has been made more wholesome.

But this is only the beginning of profound changes in all domains of life. In order to achieve a further acceleration there is a need to make the present, 12th, 5-year planning period a watershed along all the lines of economic and social development. Over the period 1986-1990 plans call for increasing the national income by 19-22 percent as compared to 17 percent in the 11th Five-Year Plan. The growth rates of industrial output will increase (from 20 to 21-24 percent) and those of agricultural output even more (from 6 to 14-16 percent). Real per capita income is to rise 13-15 percent as compared to 11 percent during the last 5-year planning period. At the same time, of course, there will also be a substantial increase in the absolute size and significance of each percentage point of growth.

Finally, it should be taken into account that we are living in a complicated and very contradictory world and have been drawn by the logic of social development into economic rivalry with the capitalist system. Our adversary in this historic contest does not intend to retreat. He is quite strong and has had quite a bit of success in assimilating scientific discoveries, in their technological application and in intensification of the economy.

There is only one way not to yield positions in the competition and to reach higher levels of labor productivity, product quality, and efficiency, and that is a radical acceleration of economic and social development. There is no alternative to that course. Socialism's international prestige and gravitational pull will depend to a decisive degree on the success achieved along that road. Of course, that also applies to keeping the peace on our planet.

Once again we turn to the figures and to comparisons to provide a more concrete grasp of what is to be done and how thoroughgoing the reorganization must be. The new version of the CPSU Program sets the task of raising the productivity of social labor 2.3-2.5-fold over the next 15 years. And that means that its average annual growth must be 5.7-6.3 percent over the same period. Is that high or low? In the 10th and 11th 5-year planning periods, for example, the average annual rise of the productivity of social labor was 3.2 percent. Consequently, the growth rates of labor productivity are to be nearly doubled. A complicated, difficult, but altogether realistic task.

Social consciousness must become accustomed to the idea that we do not have any easy problems, nor will we be having any. The realistic nature of the targets which have been outlined is determined both by the immense potential advantages of our system and by the interrelated set of measures--scientific-technical, organizational-and-economic, and spiritual-and-ideological--which have been clearly set forth in the congress documents.

Every complex, every system has its pivot, its key unit. Today that is scientific-technical progress, whose acceleration is a key aspect of the party's economic strategy. Only by harnessing the advances of the most recent stage of the scientific-technical revolution is it possible to effectively perform the entire range of economic and social tasks and achieve qualitative shifts in labor productivity. It is specifically a question of the new generation of machine tools and machines, of introducing the most progressive technologies and flexible production systems, robotization and computerization of production, and energetic mastery of biotechnology.

But the main thing does not lie in enumerating the lines of progress. This is the business of specialists. More important, it seems, is to understand the inner meaning, the newness of the present-day approach to scientific-technical progress itself. How have we been accustomed to discuss it? Progress is forward movement, and if a new machine, device, or production line is better than what now exists, then there is progress.

That kind of approach is no longer sufficient today. The comparison with what exists, however important it might be, inevitably presupposes a backward look to yesterday. New equipment must not be merely better than what exists, it must embody the most recent advances of scientific thought and must be oriented toward the furthest world frontiers. To select any other criteria for comparison means inevitably condemning oneself to technical and technological backwardness.

Once in a conversation with scientists from the GDR we departed from the topic under discussion and raised the question of the reasons why that country's athletes had been successful in international competitions. At this point a rather important detail came to light. The following approach is used in making up the country's national team for any particular sport. One needs not only to have won a medal in the national championship, but also to have had a result worthy of international competition. Unless an athlete can show that, even though he may be the national champion, he is not invited to join the team; the country does not field participants for the given sport or program. After all, what is the point of going to a European or world championship if one cannot make a decent and prestigious showing?!

This digression was needed in order to illustrate more vividly the difference in approaches (and results) between making a comparison with present achievements and with the highest world achievements.

How is one to act in cases when equipment being designed and being proposed for production does not come up to the highest world achievements? Today the answer must be straightforward and courageous: Such equipment should not be

produced. It is better to lose another year or 2, to study the best examples, to bring together the efforts of the scientists, to announce a competition among inventors, to purchase licenses if necessary, and only when the equipment has been brought up to the appropriate standards should its production and assimilation begin.

This cannot, of course, be done overnight or everywhere. But there needs to be a clear view of the objective to be striven for, and practical conclusions need to be drawn from the course elaborated by the party. Otherwise we may encounter the very same problems the next day without having made any progress in solving them.

The orientation toward the highest world achievements must become the distinguishing trait of present-day thought and of everyday practice. This must be the point of departure in analyzing and drafting plans, in evaluating the performance of scientific collectives and production subdivisions, in organizing socialist competition and in the training of personnel. This is demanded by reality and it is demanded by the course elaborated by the party toward accelerating the country's socioeconomic development.

Sometimes a question like this arises in conversation: But doesn't such an orientation slow things down, don't we bring to a halt the production of machines and devices which are good, but which do not come up to the best world prototypes? The question in economics that runs "What is good and what is bad?" is not a simple one, but there is a sufficiently clear and unambiguous answer to it even so, one which presupposes the historical approach and taking the time factor into account. What was good yesterday may prove to be bad today. A machine tool (instrument, machine, or production line) cannot be called good if in its productivity and its quality characteristics it does not come up to the highest world level. If any of us thinks differently, he is thinking in yesterday's categories and he has fallen prey to inertia.

And another fact of considerable importance. We already have quite enough and sometimes too many of many models of machines and equipment. For example, with respect to the number of units of metalworking equipment we exceed the aggregate equipment pool that exists in the United States, West Germany, and Japan.

It was an immense achievement for us to accomplish this. But as a rule today's problems prove to be the reverse side of our successes. We cannot go any further on the previous road, we need a change of direction, a reorientation from the quantitative growth of the pool of equipment to its qualitative improvement and updating. Which accounts for the course adopted toward manufacturing fundamentally new equipment capable of raising labor productivity by a multiple, that is, twofold, threefold, or higher. At the same time, we must achieve better utilization of what we already have. It is no secret that existing machines and equipment are being poorly utilized; the coefficient of the load on them is low. Sometimes, as they say, the skill of machine tool operators leaves something to be desired.

Now about the economic aspect of scientific-technical progress. Retooling the economy, which will be accomplished on an unprecedented scale over the next 15 years, may turn out to be destructive if the requirement as to the economic efficiency of the new equipment breaks down. Unfortunately, the scientists, designers, and project planners usually give little thought to this. For them the technical parameters are important: power, speed, productivity, and accuracy in machining. All of these parameters are in fact important and indispensable, but they still do not reflect the effectiveness and economic efficiency of the new equipment.

How are we to evaluate effectiveness? In answering this question we will make yet another digression which will make it possible to look at this problem from broader and at the same time truly scientific positions.

The point is that the payoff function and effectiveness of any system are given to it by a system of higher order. Scientific-technical progress is not an end in itself, but its effectiveness is determined by the extent to which it affords a time-saving and thereby economic progress of socialist society. To the same degree the time-saving is not an end in itself in economic development; it is important only as a means and source of solving social problems, of creating conditions for comprehensive development of the personality.

Accordingly, the effectiveness of scientific-technical progress (aside from its direct social consequences) is determined by the time-saving. Or--more specifically--by the difference between the saving of social labor achieved as a result of applying the new equipment and the costs of its development and use. If the difference has a negative sign, then this direction of scientific-technical progress is ineffective and destructive.

So that this does not occur, we must constantly achieve a reduction in the cost per unit of power, productivity, or other useful benefit of the new equipment. This is a categorical and irreproachable requirement in evaluating the effectiveness of scientific-technical measures.

Finally, it should be said that scientific-technical progress may itself take place in two forms: evolution and revolution. Slow partial improvements are typical of the first; here, a comparison with the level attained is widely used. In the revolutionary form of scientific-technical progress the principal references are qualitative transformations and matching the highest world attainments.

In most sectors, it was stated at the April (1985) Plenum of the CPSU Central Committee, scientific-technical progress has been taking place sluggishly and essentially by evolution, predominantly through improvement of existing technologies and through partial modernization of machines and equipment. These measures can, of course, yield a certain return, but it is too small. Revolutionary shifts are necessary--a transition to fundamentally new technological systems, to equipment of the most recent generation, which affords the highest effectiveness. Thus it is a question of retooling all sectors of the economy on the basis of present-day attainments of science and technology. The acceleration program set forth in the documents of the congress is aimed precisely at that kind of revolutionary form of scientific-technical progress.

Today it hardly makes any sense to promote scientific-technical progress: The whole matter is how and in what form it is to be accelerated. This will not happen all by itself. It is also clear that there is not much to expect from desires and appeals--after all, they have been voiced more than once in the past. So, we should look more deeply and activate the most powerful and uniquely creative force--the human factor. Scientific-technical progress in all its stages--from the inception of the scientific idea all the way to organizing the production of new equipment on a large scale--is unthinkable without human participation.

Today, as Soviet society stands at a turning point in its development, it is important to set the human factor in motion with full force in order to accelerate scientific-technical and at the same time socioeconomic progress. It is important to direct the mind and the will, the vocational skill and civic duty, self-sacrifice and seriousness, and all the best attributes of the Soviet man toward achieving the goals which have been set. But activating the human factor is not simpler, and is probably more complicated, than accelerating scientific-technical progress, and that is why it is incorrect and even harmful to be seduced by the apparent simplicity of the task. As a matter of fact we are talking about a task of exceeding complexity.

This fact needs to be emphasized because arguments about activization of the human factor have become the fashion, and, like every fashion, they are inclined to oversimplify the problem and reduce it to the level of everyday thinking, offering universal solutions. But in view of the scale and complexity of the problem of activating the human factor, it cannot be solved either by bringing forth new slogans, nor by appeals to responsibility, nor by tightening control over reporting for work, nor by making changes in remuneration. A different and more fundamental view of the problem is required. Here again we cannot proceed without referring to the fundamental propositions of theory. As K. Marx has written, "man's essence is not an abstract that is present in each individual. In reality it is the sum total of all social relations." And this is not a detached statement, not merely a happily chosen quote. This thesis is one of the most fundamental propositions of the scientific theory of social development.

So, man in his essence is a coagulation of social relations, and the personality is an individual copy from that system of relations. For all our inimitableness, each of us is the product of a certain historical era and the carrier of equally definite social relations. Whether someone likes this conclusion or not, it is actually so. It follows that to activate the human factor there has to be a purposive, planned, and comprehensive improvement of social relations, economic relations first of all. This improvement is the central link in the system of measures the party has elaborated for acceleration of the country's socioeconomic development.

And further, improvement of social relations and activation of the human factor are not two different tasks. They represent only different branches of a single task, whose performance is nothing other than social progress.

The new version of the CPSU Program and the other documents of the congress have defined the main and fundamental directions of the further improvement and, in the necessary cases, even the revamping of the entire system of social relations. But here there are no ready-made solutions of specific problems (nor should there be!). It is life, the experience of the masses, and science that must suggest them.

Thus the programmatic documents of the party, affording a clear and scientifically verified strategy for the movement toward the new frontiers of socioeconomic progress, open up at the same time a broad road for initiatives, for the creative search to find the forms and methods of solving the problems which have come to a head. The course of the discussion in advance of the congress showed how powerful, rich, and fruitful is the flow of popular initiative and how wise and farsighted the Soviet man is.

We would like to share our own reflections on the ways of improving social relations. I will begin with the most fundamental relation, the one which determines the nature and form of the socialist system, specifically with the ownership of the means of production. Its establishment places all citizens in an equal relationship to the means of production, makes them fellow masters of the country, puts an end to crises, opens up broad room for effective management of the economy. All the historic advantages of socialist society are directly or indirectly related to it.

At its very foundation social ownership is invariable: It has been and remains the property of the people, representing nothing other than the social form of appropriation of the fruits of human labor that is appropriate to the present-day productive forces. But even ownership itself is not immobile in its movement, in its specific manifestations. The degree of its maturity increases, it improves, or, to put it more correctly, the mechanism of its economic realization must improve. Experience has shown that establishment of social ownership does not mean that everyone all at once begins to feel himself the owner of the means of production and to behave like an owner--prudent, thrifty, and wise--far from it.

And it is not only nor so much that time is necessary to overcome the burden of habits inherited from the past. The main thing is creating an economic and social mechanism that would merge the interests of socialist society as an integrated work collective and those of each worker. The augmentation of social wealth must if possible exert a direct and immediate influence on the situation of those who have brought that augmentation about, and the loss inflicted on society must fall upon those responsible for it with the same undeterability.

Unless that happens, this possibility of merging interests breaks down. It is then that apathy and social passivity are engendered, a philistine psychology with its notorious principle of "it has nothing to do with me." Things like this are not simply the fruit of "remnants of the past" in people's consciousness or evidence of a slack effort and indoctrination. Their causes lie deeper--the imperfect state of relations making up the mechanism of the movement and realization of social ownership.

In speaking about a merger of interests, the author is far from the thought of oversimplifying the problem, reducing the entire matter to forms of remuneration and to the use of incentive funds, although at the same time it would be unreasonable to underestimate them. The linkage of interests is a most complicated and subtle social phenomenon in which everything is important: that work collectives be opened wide to public scrutiny and well-informed, that they be allotted authentic rights in decisionmaking and correspondingly burdened with full responsibility for the consequences of those decisions, and that the individual receive a well-thought-out education in economics and instruction in civic virtues.

The conclusion we come to is rather obvious. If the advantages of socialist ownership are to be realized more fully, the entire set of social relations and economic and social institutions has to be improved. Achieving that signifies activation of the human factor in fact, signifies making every work collective and every worker not only the nominal owner, but in fact the authentic owner, and then social progress will also take place more rapidly.

Improving the forms and methods and the entire mechanism of the realization of socialist ownership has yet another aspect which is related to the embodiment of its potential capabilities in the final results of production, in the growth of production efficiency. If hitches occur in economic movement, the work rhythm is disrupted, and likewise if barriers are set up on the path which scientific-technical discoveries take into production, this is a signal that all is not well, it is evidence that this mechanism has been poorly set up.

The reasons for such hitches are manifold: departmentalism and localism, technical conservatism, and a low level of responsibility. The fact that the things enumerated are by no means isolated is well known, just as it is well known that they are not first causes. What gives rise to them? More than anything else the imperfection and the maladjustment of economic relations, the purely quantitative orientation of planning targets, the one-sidedness of economic levers, the highly complicated nature of management structures--in other words, everything that comes under the heading of the "economic mechanism."

Consequently, if the country's socioeconomic development is to be accelerated, if the advantages of socialist ownership are to be fully and effectively mastered, there has to be a radical improvement of the economic mechanism. That is the conclusion the party has come to. Whatever issue we might take up, it was stated at the April (1985) Plenum of the CPSU Central Committee, from whatever angle we approach the economy, in the final analysis everything points toward the need for a substantial improvement of management and the economic mechanism as a whole. Very important theoretical generalizations stand behind these simple and comprehensible words. A few words about the nature of the problem. As historical experience has demonstrated, it is through the economic mechanism that the contradictions are resolved between the dynamically developing productive forces on the one hand and production relations on the other. Improvement of the economic mechanism, then, guaranteeing that it is appropriate to the changing economic conditions, gives a thrust to production and to a rise of production efficiency.

But even that is not all. It is through the economic mechanism that the potential and the advantages of socialist ownership are realized, are embodied in practice. It thereby takes the form of a bridge, to use the terms of philosophy, leading from possibility to reality.

Which accounts for the immense and exclusive role of the economic mechanism in accelerating socioeconomic development. Today it is in need of substantial modernization and restructuring. The need for this is imposed by the character of the present stretch in historical development, which is that of a watershed, by the tasks of qualitative improvement of all aspects of the life of Soviet society. Restructuring presupposes consistent and comprehensive development of the principles of economic activity inherent in socialism, removal of the constraints which have been holding back their application in the past. We are specifically referring to the development of both principles of democratic centralism, to the mutual strengthening of the independence of the economic cells and their responsibility, of the group principle and the one-man principle of power and responsibility, to strict observance of unity between the measure of labor and the measure of consumption, and to the optimum combination of large, medium-sized, and small enterprises.

But in and of themselves the principles of economic activity do not prescribe ironclad solutions. They create sufficiently broad room for maneuvers and for choice. It is indispensable to develop everything that contributes to acceleration of scientific-technical progress, to raising efficiency, to attainment of the highest final results. And, conversely, there has to be resolute rejection of the forms, methods, and solutions--regardless of the halo of holiness and seeming unshakability that surrounds them--if they have become an impediment on the road toward intensification of the economy.

In order to clarify the possible cloudiness of general expressions, I will attempt to prove what I have said with an example. For a long time quantitative growth expressed in gross (volume) indicators reflected accurately enough the measure of our successes. Planning "from the level attained," which has persisted until the present, the orientation toward overfulfillment of plans, and most of the economic levers applied in practice were based on this. This view has become a kind of dogma, a stereotype of economic thinking.

Today the economic situation has changed radically: "Much" has ceased to be a synonym of "good." We have come close to the limit of growth for many products, indeed many very important products. Here are a few illustrations: In 1984, the Soviet Union smelted 154 million tons of steel, almost as much as was produced in that year by the United States, West Germany, England, and France taken together. By the year 2000 we should double the national income for all practical purposes at the present volume of steelmaking, since the metal intensiveness of the national income is to be cut in half. Today we produce even more leather footwear than the four capitalist states referred to. The number of television sets relative to population (per 100 families) has grown from 8 in 1960 to 96 in 1984.

The main thing today is quality, the technical level of the product, the rate at which it is updated. And this, of course, requires new approaches in

planning and economic incentives, in organizing socialist competition, and a different type of economic thinking is required. The tribute to the past is becoming a heavy burden holding us back from taking the step into tomorrow.

One of the striking things in the party assessment referred to above is its indication that all contemporary problems ultimately point to a substantial improvement of management. These words also emphasize the importance of improving the economic mechanism and the need for broad and comprehensive solution of a whole number of problems crucially related to acceleration of the country's socioeconomic development.

Today it is no longer possible to go forward without at the same time developing the entire network of democratic institutions in the organization of the life of society, without guaranteeing consistent application of the principles of socialist self-management. Otherwise it is impossible to overcome such things, and unfortunately they are not isolated either, as indifference and social passivity and the absence of a vigorous attitude toward life.

Here there is much that needs to be done and redone relying on experience already gained in the recent past. We are referring to a broadening of openness, democratization of decisionmaking procedure, the accountability of the key officials of government and economic bodies to the masses, invigoration of the work of the Soviets, and development of criticism and self-criticism. And the most important thing, of course, is to develop all of the forms of spontaneous activity in society and direct democracy. Only if he is authentically a part of the management of production and of the affairs of government and of society will man develop in himself an attitude toward his work that is that of the authentic master. Even the mightiest economic levers, even the diverse methods of indoctrination are incapable of replacing the higher education provided by participation in actual management.

Democratization of management as the main highway for improvement of sociopolitical relations is the decisive weapon in fighting bureaucracy and careerism and everything that is alien to the norms of our life, everything that is holding back the rate of social progress. All of this cannot be done in a single day. A persistent and consistent effort is needed, democratic traditions have to be built up, the appropriate procedures have to be properly adjusted, and a number of preconceptions have to be overcome. But, as has already been said, we don't have any easy problems.

The party's position on these matters is clear and definite. As stated in the new version of the CPSU Program, the party will unswervingly follow the line toward democratization of management, of the process of drafting and adopting government decisions, guaranteeing that the optimum choice is made among the alternatives and that the differing opinions and proposals submitted by assemblies of work collectives and also individuals by their place of residence are taken into account and compared. The most important legislative bills and solutions will be put up for nationwide discussion and voting. The range of issues on which decisions may be taken only after discussion in work collectives, in standing commissions of soviets, in trade union, Komsomol, and other public organizations will be broadened. There will also be further improvement of

the system for summarizing and carrying out the instructions of the voters, the petitions and suggestions of individuals, the study of public opinion, and the population will be better informed about the decisions taken and the results of their execution.

How realistic the acceleration is will depend in large part on the appropriate reorientation of social consciousness, on overcoming the stereotypes inherited from the past, and on working out a truly contemporary economic thought. At present it is still the usual thing in this area for inertia to win out over contemporary approaches. The consciousness of the masses, including the consciousness of many workers in planning and economic bodies, and, unfortunately, one must also note, of scientists, has been slow to turn in the direction of intensification. As in the past the purely quantitative approach to evaluation of economic growth, the orientation toward gross indicators at the expense of final results is still sufficient for some people. Doing things for the sake of appearance, excessive cautiousness, and technical and economic conservatism have not been eradicated. As for economic science, it still has not wrenched itself loose from the inclination to scholastic discussions, and the turn toward the new requirements of life has been slow. That is why the restructuring of social consciousness, the development and introduction of an up-to-date style of economic thought are an integral part of the program for acceleration of the country's socioeconomic development.

Probably one might speak about the need for a specific and well-thought-out and coordinated program of economic education and training which might include measures to shape basic economic knowledge even in secondary school which would then be supplemented and developed in the system for training and improvement of the qualifications of engineering and economic personnel and measures related to inculcating economic sophistication in the masses.

Particular attention should be paid here, of course, to training economists themselves. When we speak about a new and up-to-date type of economic thought, this must above all be in the hands of the specialists in planning and in the organization of work, in statistics and accounting, future plant economists and bank personnel. The present-day economist is a man who possesses the power to look at problems in the terms of political economy, the ability to think in the categories of efficiency and intensification, one who has a perfect mastery of the methods of scientific analysis. Much needs to be done so that the work of the economist is given authority and prestige (as in fact it deserves). It would seem that the efforts taken toward this end will not be in vain. They will pay a hundredfold return.

Finally--and this is very important--this program should make provision for setting up mechanisms that would act with the force of objective necessity to awaken people to think and act in economically literate ways, accountably, orienting themselves toward the criteria of efficiency, quality, and a high level of final results.

The course elaborated by the party and directed toward acceleration lies at the basis of its bold, large-scale, and ambitious plans aimed at qualitative transformation of Soviet society. It is based on bold scientific forecasting

and faith in the constructive capabilities of socialism and the creative energies of the people. That in fact is its attractive force and at the same time its realism.

The Soviet people place great hope and expectations on the course toward acceleration of the country's socioeconomic development. They are also showing a greater readiness to apply their own labor, creative energy, and creative search to its fulfillment. And the most important thing today is the transition from words to deeds, from approval to real steps.

Which accounts for the sudden increase in the value of an attribute like enterprise. Probably this is what we have lacked more than anything else in the recent past. Enterprise is like the antithesis of the meeting-goer's sterility, the idle talk, and the inclination toward noisy campaigns, in which, as they say, "for every kopeck's worth of work, there is a ruble's worth of confusion." Establishing enterprise as the style and standard of behavior signifies a victory for orderliness and order over slackness and irresponsibility.

A.S. Makarenko, whose word should be trusted, once said that "in our society enterprise becomes a virtue which should be possessed by all citizens, it figures as a criterion for correct behavior in general." These words and the idea they contain have not gone out-of-date. Even today keeping one's word, combating ostentatiousness and doing things for the sake of appearances, the ability to persist in spite of difficulties (imagined or actual), and to move forward in spite of them, to always accomplish what one started out to do, in short, everything that characterizes authentic enterprise, represent a reliable criterion of "correct behavior in general."

In undertaking actions to pursue the course which has been defined by the 27th party congress, we are starting out on a road of combat and selfless labor inspired by high ideals, starting out on the road of acceleration, which will necessitate a revamping, a break with the old, and establishment of the new. This is a strenuous road. But it is the only road that leads toward the goal.

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Implications of Social Ownership Spelled Out

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 20 Mar 86 p 3

[Article by L. Abalkin, corresponding member of the USSR Academy of Sciences, Moscow: "The Dialectics of Interaction: The 27th CPSU Congress on Improvement of Production Relations"]

[Text] Our society's development has entered a stage in which an abrupt break is to be made. Not only are the accumulated negative tendencies to be overcome, but the country is also to be led to qualitatively new frontiers. Reality itself requires a turn toward the fundamental principles of Marxist-Leninist theory. Among them analysis of the dialectics of interaction of the productive forces and the production relations has particular significance.

The fundamental approach to the problem is quite well known. Production relations are shaped on the basis of the level of the productive forces attained and constitute the form of their movement and development; they may speed it up or slow it down. Revolutionary overthrow of the old production relations which have lived out their life signifies a transition to the new and more progressive mode of production. It is the most profound conflict between the mighty productive forces, which are social in their nature, and the private-capitalist form of appropriation that makes replacement of the capitalist mode of production by the communist mode inevitable.

Under the conditions of socialism production relations are by no means frozen, given once and for all. Their stable correspondence to the developing productive forces needs to be constantly maintained, and contradictions arising between them need to be promptly discovered and resolved. But this is the question: How and by what means is that correspondence to be achieved? When and under what conditions do the particular forms of these relations begin to hold back scientific-technical progress, to slow down economic growth, to impede social development? And the most important thing is what has to be done to resolve the contradictions that have arisen and to speed up social progress?

Today the social sciences, above all the philosophy and political economy of socialism, have proven not to be sufficiently prepared to answer these questions. Moreover, quite a few very oversimplified notions have taken shape in theory concerning them. To be specific, it has been assumed that establishment of social ownership creates all the necessary and sufficient conditions for rapid and unhindered development of the productive forces. Should any sort of adverse things happen after all, then the causes of them are probably of a foreign economic nature. For example, the increasing complexity of geological conditions for mining raw materials, the bad weather, oversights in the indoctrination effort, and most important of all--mistakes in planning. Such notions, of course, lead one away from an analysis of the profound processes.

Indeed even production relations themselves are sometimes treated extremely abstractly, as something far from everyday affairs and concerns. It is forgotten that economic relations among enterprises, between them and bank institutions, price and tax policy, the forms of remuneration and material incentives--these things are in fact real and specific manifestations of production relations. Theoretical nihilism has made itself evident and unfortunately is encountered among practitioners. Many people have felt and still do feel that investigation of the problems of improving production relations has nothing to do with them, has nothing to do with their own everyday affairs, that these questions are, they say, purely abstract.

The result of such notions is well known: A discrepancy has come about and has gradually intensified between certain elements of production relations and the productive forces which have grown many times over and have undergone qualitative change. As noted in the Political Report of the CPSU Central Committee to the 27th Party Congress, the forms of production relations which are now operative, the system for the conduct of economic activity and management basically took shape under the conditions of the extensive development of the

economy. They have gradually gone out-of-date and have begun to lose their stimulative function and in some respects have become an impediment.

This has been reflected above all in the dropping rates of economic growth and especially such a decisive indicator as the productivity of labor. In industry its average annual growth over the last three 5-year planning periods has been cut in half--from 6 to barely more than 3 percent. The retooling of production has been held back: whereas in the 10th Five-Year Plan the average annual rate of modernization was 162,000 units of production equipment, during the last 5-year planning period the annual rate was 148,000. There has also been a slowing down in the turnover of physical resources: In industry the value of inventories exceeded 157 billion rubles as compared to 116 billion 5 years ago.

If these things are to be overcome and socioeconomic development authentically accelerated, there has to be substantial improvement and in some places even revamping of the forms of production relations. And in such important spheres of production relations as management of the economy, it is a radical reform that is required. Complete theoretical clarity is naturally necessary for this purpose.

Socialist production relations open up broad room for development of the productive forces under one unfailing condition--that they undergo constant improvement. This conclusion of the 27th party congress is based on conceptualization of the lessons of history. It not only lays the base in theory for the strategy of acceleration, it also places visible guideposts for accomplishing it in practical work.

It is important to bear in mind that production relations under the conditions of socialism do not by any means undergo an automatic change as a consequence of the growth and qualitative transformations of the productive forces. They have to be purposefully improved, taking into account, of course, the requirements of the economic laws of socialism. These requirements are not realized automatically either, but through the conscious activity of people. Here again any passivity, slowness, any vacillation, or scientific superficiality are altogether impermissible.

Problems related to development of social ownership of the means of production are becoming very topical. This is the basis of our system. Its establishment removed social constraints on the progress of the productive forces inevitably imposed by private ownership. But the formation of social ownership cannot be represented as an instantaneous act. Such a view would be limited and would be true only in part--with respect to its legal form. In its economic content ownership is a complex, ramified, and constantly developed system of relations. It embraces relations between individuals, collectives, sectors, and regions of the country in the use of the means and results of production and the entire range of economic interests. Their totality is in fact the content of the economic mechanism of socialist society. Its adjustment and in the necessary cases revamping is the main direction and basic method of improving the relations of ownership of the means of production.

What exactly needs to be changed and revamped, and how should this be done? The strategic directions have been formulated in the new version of the CPSU Program and Basic Directions for the country's economic and social development in the 12th 5-year planning period and over the period up to the end of the century. Today it is worthwhile to turn attention to the most "ailing" points which are in need of revamping and which can no longer be left for later.

The most serious impediment on the road toward scientific-technical retooling of production and qualitative transformation of the productive forces are now the economic forms and relations oriented toward the specifically quantitative and gross approach to evaluation of economic growth. The time for such reference points long ago departed into the past once and for all: We are producing more steel and cement, leather footwear, and woolen fabrics than any other country, but today this does not reflect the level of development of the productive forces. Nevertheless, such economic references are not dying out; they are very much alive because they are based on the stable stereotypes of a thinking that is penetrated from above and below by the "ideology of the gross." One could cite quite a few examples of this. And if we analyze them to any depth, it becomes clear that they all represent nothing other than a manifestation of the lack of correspondence of the production relations to the requirements of the present-day productive forces. Which means that the outdated forms of economic activity have to be resolutely and, this is especially important, immediately rejected.

The important thing in the improvement of the production relations is not simply to see that they correspond to the level of the productive forces that has been attained. There is a need to look forward, to see the future. And this means that the economic forms must be built as it were for growth and must possess a high degree of extra strength.

Take, for example, the nodal points in the most complicated system of production relations--associations and enterprises. It is here and only here that real utilization of the scientific-technical potential takes place, that physical goods are produced, that the national income is created. Associations and enterprises are the epicenter, the starting point, and the point of convergence of economic relations, the forms and methods of management, motivation and responsibility, all the wealth of economic relations. Other relations that have taken shape in the process of activity of nationwide, sectoral, and regional bodies of management are secondary and derivative in nature. That is what the theory says. But in practice it is all the other way about: The relations of the superstructure have thus moved into the foreground, which it seems, is being mined like the "salt of the earth" in the corridors of ministries.

If everything is to be put in its right place, there is only one way--to establish cost accounting (khozraschet) in its profound Leninist meaning. The activity of enterprises and associations must be regulated not by administrative directives as to what to make for whom and when and how, but by long-term economic norms that open up room for an enterprising attitude, initiative, and creativity of work collectives. Only in this way is it possible to realize the function of the workers as the owners of the country. And they cannot be

that unless they become the true masters of their own house in their plant or in their shop--masters who are diligent, motivated, and responsible for augmenting the national wealth.

Practical steps are already being taken in this direction. The test of the new methods of economic activity has shown that the general direction adopted is the right one. But the results could be considerably better if on the one hand the operation of sectoral ministries and central economic departments, which as in the past are unsparing in their efforts to restrict the rights of enterprises, were correspondingly revamped, and on the other if incentives for the growth of efficiency were broken down to every section, every brigade, and every work station.

Improvement of production relations requires a comprehensive approach because these relations are systemic in nature. Partial and local changes cannot yield the expected results. But this means that we must take a broad view of economic processes, a view that is up-to-date, and ultimately we must extricate ourselves from the blinders which have been hindering many theoreticians and practitioners. I am referring to underestimation of the role of economic interests, the negativism in evaluating money-exchange relations. It is precisely this that for a long time has hindered the introduction of cost-accounting principles, the principle of pay-as-you-go, and self-financing. Now the first step has been taken in this direction at VAZ and in the Sumy Machine-building Scientific-Production Association imeni M.V. Frunze.

The imperfection of particular specific relations is human handiwork. It is up to people to change them and improve them. And that is why there is no basis for passivity and inactivity. Yet there are people who are still disposed in this way: "We will wait," argue certain managers in the economy. "When the conditions change, then we, too, will begin to operate in the new way."

That is not the right position. What is needed is not waiting, but acting, even in such a "high" sphere as improvement of production relations. The thrust for this has been given: The decisions of the 27th CPSU Congress have armed us with a clear perspective, they have stimulated the search for untapped potential, and they have provided an inspiration for creative effort. Today there is in fact nothing more important or higher than the cause of reinforcing the course elaborated by the party toward acceleration of the country's socioeconomic development.

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PLANNING AND PLAN IMPLEMENTATION

PRODUCTION PLANNING TRENDS, PROPORTIONALITY CONCEPT EVALUATED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 86 pp 35-41

[Article by V. Smirnov, candidate of economic sciences, and V. Palyutin, candidate of economic sciences: "Some Trends in Improving Planning and in Proportional Production"*)]

[Text] The conversion of the socialist economy to the primarily intensive route of development is due, as stated at the 27th CPSU Congress, to the need for further improving the economic mechanism. Emerging as the main trend in solving this task is the improvement of planning and increase in the role of the state plan as the chief instrument of accomplishing the party's economic policy. M. S. Gorbachev emphasized at the April (1985) Plenum of the CPSU Central Committee that planning is core of management. It should be the active lever for intensifying production and bringing about progressive economic decisions, and ensure balanced and dynamic growth of the economy.**

By developing both aspects of democratic centralism -- the most important principle of management under socialism -- we lay stress on starting the formulation of the annual plan from below -- from the enterprises that have to determine the product mix (assortment) on the base of customer orders, and thus increasing the role of enterprises in planning and their responsibility for more fully supplying the national economy and the public with the goods they produce by entering into economic contracts with customers. These requirements were embodied in the terms of a large-scale economic experiment undertaken in 1984-1985 in conformity with the decree of the CPSU Central Committee and USSR Council of Ministers "Additional Measures to Expand the Rights of the Productive Associations (Enterprises) of Industry in Planning and in Economic Activities and to Increase Their Responsibility for the Results of Their Work."

During the experiment contract arrangements were developed and delivery discipline was strengthened in the following directions. The degree of coordination was increased between plan tasks and material and technical resources.

*In the form of a discussion.

**"Materials of the Plenum of the CPSU Central Committee, 23 April 1985," Moscow, Politizdat, 1985, p. 12.

Enterprises formulated their draft five-year plan in conformity with the control figures, limits on material resources, and economic norms communicated to them by senior agencies. There must be all-around development of direct long-term economic ties and orders of supply and trade organizations to deliver goods. The development and amendment of annual plans for the production and distribution of goods must be accomplished in time to preclude the need for advance ordering and ensure the issuance of orders (confirmation plans) by supply agencies for delivering them no later than two months prior to the beginning of the planning year. The volume of production of goods in terms of cost and other cost indicators are defined in the annual plans of production associations (enterprises) on the basis of the tasks in the state plan for the output in physical terms of the most important types of goods, and of contracts concluded for the delivery of goods. The chief estimative indicator of the activities of industrial ministries and of industrial collectives and their managers is the volume of goods produced, with consideration for the performance of commitments under contracts and supply orders. And, finally, the stimulating role of production associations (enterprises) substantially grew, and their material responsibility increased for the on-time and complete performance of contract commitments for the delivery of goods.

The results of the work of the sectors and enterprises involved in the economic experiment are evidence that the accomplishment of the measures mentioned had an overall positive effect on the fulfillment of contract commitments. The enterprises of Mintyazhmash [Ministry of Heavy and Transport Machine Building] fulfilled the plan for the sale of goods related to delivery commitments by 94.5 percent in 1983, by 99.2 percent in 1984, and by 99.0 percent for January-September 1985. The improvement in work enabled the sectors in 1984 to reduce the volume of undelivered goods by more than a factor of six. For the three quarters of 1985 it amounted to 46.1 million rubles, versus 295.0 million rubles for 1983. During the experiment the total number of enterprises fully meeting their delivery commitments nearly doubled. The greatest success was achieved by the Zhdanovtyazhmash Association, the Barnaul Transport Machine Building Plant imeni V. I. Lenin, and others.

Enterprises of the electrical equipment industry reduced undelivered goods in 1984 by nearly a factor of three. The performance level of the delivery plan increased from 96.9 percent in 1983 to 99 percent in 1984, and 98.3 percent for the first nine months of 1985. The highest delivery rate in this sector was achieved by the Svetotekhnika Association in Saransk and the Elektroagregat Association in Kursk. Under the experimental conditions the enterprises of UkSSR Minpishcheprom [Ministry of the Food Industry], of the BSSR Minlegprom [Ministry of Light Industry], and of the LSSR Minmestprom [Ministry of Local Industry] fully coped with the tasks for goods deliveries.

The machine building ministries that took part in the economic experiment achieved a quite high level of meeting delivery commitments in 1985 (for the first nine months of 1985: 98.7 percent by Minstankoprom [Ministry of the Machine Tool and Tool Building Industry], 98.6 percent by Minkhimash [Ministry of Chemical and Petroleum Machine Building], 98.6 percent by Minpribor [Ministry of Instrument Making, Automation Equipment, and Control Systems], 99.3 percent by Minselkhoz mash [Ministry of Agricultural Machine Building], and 99 percent by Minenergomas h [Ministry of Power Machine Building].

An important aspect of the experiment was the creation for enterprises of conditions under which contracts were prepared and concluded prior to the start of the plan year. This was achieved because of the earlier deadlines for developing plans at all levels of management and stages of planning. For example, when drawing up the 1985 plan for Minelektrotekhprom [Ministry of the Electrical Equipment Industry], in February-April 1984 USSR Gosplan and USSR Gossnab did the work of specifying tasks for the output of goods in natural terms, issuing orders for them, and defining the limits for material resources. This made it possible for the enterprises of this ministry, jointly with the marketing agencies of USSR Gossnab, to start developing in May the draft plan for the output of goods in natural terms for a broad range of items, and loading documents for each association and enterprise. This was practically the first time this work had been done for an annual plan in the time indicated. With control figures that include economic norms, enterprises were enabled to work out a production plan for a broad range of items in shorter times and on a more balanced foundation (that is, at the stage of developing the draft plan one of the most important goals of the experiment was accomplished to a considerable degree -- expanding the independence of the primary unit of production).

Farther along, during June and July, USSR Gosplan and USSR Gossnab coordinated problems of producing goods in natural terms and of supplying material and technical resources. Previously, this work had been finished only in October or November of the preplan period. The ministry decided to refrain from advance ordering of raw materials, materials, and several types of components. As a result, by September 1984 all the enterprises of the electrical equipment industry had worked out plans for the production of goods in 1985 that were correlated with material resources, something they had not been able to do before.

However, not all the stipulations of the Methodological Instructions on Procedures and Deadlines for Developing Plans were carried out. We have not succeeded in getting rid of the negative phenomenon of applying funds to certain types of resources only after the production program has been set up. The main shortcoming seen is that changes in planning have not touched the main one -- the contract, which as previously has not found its place in the process of developing the plan. The experiment was furnished with the previous planning technology, but in an improved version, which does not meet contemporary requirements. The amended timetables for planning work were aimed at solving an important, but different, task -- the elimination of advance ordering, and the establishment of conditions for accumulating a batch of orders by the start of the plan period. As a result the supplier-enterprises, and especially the customer-enterprises still did not have enough of a role in developing plans for the output and sale of goods.

However, under conditions where demands on the means of production and consumer items are being more fully met with regard to quantity, the task of matching their assortment and quality with customer requirements has now moved to the foreground, rather than mechanically increasing the volume of the product mix being produced. This aspect of the activities of associations and enterprises

has become a dominant feature in the area of planning, and requires that existing technology find room for a real and flexible appraisal of consumer requests, i.e., that the contract be transformed into a planning instrument. Various alternatives are possible here. Of greatest interest, in our opinion, is the further development of direct long-term economic ties as forms of the consolidated centralized planning of the production and distribution of goods on the foundation of the five-year plan, as well as the organic combination of periods of preplan work and of plan formulation. These approaches often clash with each other, and only by uniting them can we ensure the proper functioning of the planning mechanism in our country.

The conclusion by enterprises of contracts for the delivery of goods prior to the approval of annual plans is complicated by the fact that when developing drafts of the plan for the following year enterprises do not have precise enough tasks under many sections. In the first place, the five-year plan has still not become the main form of planning. In the second place, it is not detailed enough to serve as the instrument that provides funding-resource support for the national economy. The conclusion is growing that the existing procedure of developing plans for production and for material and technical supply cannot be based solely on five-year planning. The search for ways of changing this procedure must be accompanied by investigating and defining ways for the five-year plan to participate in resource support for the national economy. The most acceptable alternative is to conclude economic contracts for a five-year period between enterprises and their middlemen.

The requirement to convert enterprises to direct long-term economic ties has long been contained in official documents. The work experience of individual enterprises and associations testifies to the effectiveness of these ties in the area of improving material supply to consumers and formulating a product-mix program for industry. At the present time 23 percent of the output of 2,800 items of industrial-technical designation is delivered under so-called long-term connection, and sold through the USSR Gosplan system. In industry virtually all associations and enterprises with large series production have been converted to these ties.

However, the level achieved in the development of direct long-term economic ties cannot be considered adequate, since the long-term link between suppliers and consumers is annually adjusted by the agencies of USSR Gosplan across the whole spectrum of deliveries. The reason is the lack of stable five-year plans at all levels of management. The development of direct long-term economic ties is also retarded by the fact that they actually constitute a form of semi-funded resource support, of which a considerable part must be excluded from the annual allocation of resources, for which there is no allowance in the context of traditional strict funding.

The substantial expansion of direct long-term economic ties is opposed by a number of factors. Primarily these are the limits to detailing in the five-year plan by natural composition, and the limits to shipping efficiency. And finally, deliveries of industrial-technical goods that were directly excluded when defining the volume of resources directed at long-term connection in the 10th and 11th Five-Year Plans. These include: export-import deliveries, since

we have not yet sufficiently developed direct relations among the enterprises of different countries; the volumes of goods going into trade, since the middleman between the manufacturers and purchasers is usually small wholesale and retail organizations; deliveries to and from the state reserve; volumes of goods intended to set up construction jobs and to rebuild existing enterprises, by virtue of their preeminently one-time nature; non-steadily accomplished deliveries of materials used for capital construction; resources of the output of newly introduced productive capacities in the year of planned introduction; deliveries of goods to small and unsteady consumers, etc.

In the future, to the extent that the territorial agencies of USSR Gosplan will be ever more active in fulfilling the functions of a major consumer (middleman), the volume of bespoke goods will decline. But the dynamics of this process will largely depend on the amount of capital in the plan allotted to develop USSR Gosplan's warehousing system. However, even in that case, regardless of the increase in scale of long-term economic ties, the interrelations between territorial agencies and the immediate consumers must be based on a system of funding (ordering) connected with the annual plan.

However, the framework of annual planning, even if the time for preparing and completing it is speeded up, is too narrow and does not allow the contract to be included in the process of working out plans. The main difficulty here is how to utilize contracts at the stage of developing a plan, when they themselves are secondary in relation to the planning foundations on which they are drawn up.

This is a problem not just for the USSR. It is generally acknowledged in all the CEMA countries that the economic contract is one of the important instruments of planning. However, to utilize it directly in the planning process considerably depends on mastery by those countries of direct or indirect managerial methods. In such countries as VNR [Hungary], recently in PNR [Poland], and partially in NRB [Bulgaria] the economic contract serves to a considerable extent as the basis for working out the independent plans of economic organizations. In countries with an address-directive system of arriving at tasks of pricing in natural terms (GDR, CSSR, SRR [Romania], and others), where the contract is normally drawn up on the base of the appropriate plan documents, it has proven virtually impossible to make genuine use of it when formulating the plan. But an alternative has been found (CSSR and Romania) -- the sliding two-year term (preplan-plan). In principle it ensures the involvement of the basic economic components in the development of a national economic production program, and together with preliminary contracts and other elements of the economic mechanism, it creates genuine prerequisites for preparing current plans from below under conditions of preeminently direct planning.

Considering the experience of the CEMA countries, the particulars of our economic mechanism, and the results of the experiment performed, we propose the following basic planning system, which we believe will make it possible to use the contract when developing plans, in order to improve balance in the output of specific types of goods and genuinely improve the influence of consumers on production. The main component of this system is the five-year plan, which serves as the main organizer of all economic activities, including the

enterprise level. At the same time there must be comprehensive development of economically feasible direct long-term economic ties as the form of consolidated centralized planning of the production and distribution of goods in the five-year plan that provides for further specification of all delivery parameters in five-year and current economic contracts.

Based on the functioning of long-term economic ties, there must be five-year (broken down by years) balances and plans for the distribution of goods by capital holders in the product-mix group coordinated between USSR Gosplan and USSR Gosnab. And for this product mix the ministries will assign to their subordinate enterprises limits of material resources. Within the assigned limits enterprises converted to direct long-term economic limits will specify the specific assortment and the deadlines and other terms in the contracts for the delivery of goods, in the light of which the production program will be drawn up. We believe that these enterprises must also be given the right, in case of necessity, to jointly utilize resources to carry out measures to improve production technology, improve product quality, economize on materials, etc. This will intensify industrial-economic ties.

One of the most essential elements of the proposed system is the adoption of continuous planning (preplan-plan). In the first year the final annual plan is approved, and developed in the light of the contract commitments agreed on among the enterprises, and in the second year the preliminary plan is revised in the context of updating the approved five-year plan for the year in question. It will serve as the basis for drawing up preliminary contracts and for bringing the plan and contract closer to the period preceding the approval of the final annual plan for the following year.

Use of the preplan-plan system will not only make current planning more flexible, but will also make it possible to approach the problem of the five-year plan more specifically and efficiently, and at the same time make it less detailed and more stable and flexible. To levy on every enterprise a whole array of natural and price indicators, and on that basis to construct economic norms (with annual breakdowns), as has been done until recently, represents a very rigid system for the development of annual plans, and one incapable of allowing for changes that occur.

Moreover, under the present planning system demand for goods is defined by the enterprises' orders, which are based on information about the volume and structure of production in the preceding period and their own draft plans. Likewise, plans at the time orders are placed are oriented toward what has been achieved, plus some factor for growth. In other words, the structure of planned demand today inevitably reproduces the structure of the past. We believe that the proposed planning system will alter the situation and more accurately reflect genuine demand. This will require a substantial restructuring of the work of studying and defining demand on the national economic level. The responsibility for determining demand for a given product should be vested in the agency responsible for satisfying it -- the leading ministry. It must be granted genuine rights and measures to influence other manufacturers.

It would be a great step in improving balance in the plans levied on enterprises for production and resource supply to restructure the multi-channel system of distributing material resources. As a rule, an enterprise should have a single channel for obtaining resources -- its own ministry, i.e., the agency that plans the mix and volume for its output of goods.

Accomplishment of the measures proposed will make it possible to gradually limit the area of the middleman activities of soyuzglavsnabsbyt [trusts of the Main Administration of Supply and Marketing] and concentrate them in the organizations with economic ties, and increase the role of the territorial agencies of USSR Gosnab as major consumers and suppliers of material and technical resources.

The ideas presented reveal only in a very general way the trends for improving planning under the new conditions of management. Many specific approaches still have to be worked out. Specifically, it is not clear whether the procedures and deadlines for preparing the first-year plans and the preliminary plan for the following year should be combined. Much has to be uncovered on the problem of the five-year plan and its connections with direct long-term economic ties, and of the connections of subsequent five-year plans with the current plan for production, material and technical supply, etc.

However, we believe that accomplishing the method described will make it possible to coordinate production planning with its resource supply. The economic contract will thereby become the element of the state plan that sets forth more specific parameters for the production and delivery of goods in strict conformity with all the legitimate requirements of consumers and the actual capabilities of the producers. The plan itself will therefore contain the necessary conditions to ensure the proportional production and distribution of specific items during its implementation.

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INVESTMENT, PRICES, BUDGET, AND FINANCE

STRENGTHENING OF LOCAL BUDGETS REVENUE BASE ADVOCATED

Moscow FINANSY SSSR in Russian No 3, Mar 86 pp 18-25

[Article by V.G. Panskov, candidate of economic sciences, and L.S. Velichko
"Tasks of Strengthening Revenue Base of Local Budgets"]

[Text] Local budgets are a major component of the USSR budget system. They include 52,429 separate budgets and are a solid financial base for local soviets of people's deputies. Over the last 20 years the size of local budgets has almost tripled, and in 1985 it exceeded 56 billion rubles. They have grown especially fast since adoption of legislation of the USSR and the union republics broadening the powers of local soviets in performing the tasks of economic and social-and-cultural construction. A further expansion of their size is bound up with performance of centralized measures to raise the standard of living of the population in accordance with party and government decisions. In the seventies a great effort was made to transfer to the jurisdiction of local soviets, above all rayon and city soviets, enterprises and organizations of local industry, for consumer services to the public, municipal services, trade and other sectors, as well as social welfare and cultural institutions serving the population living in the jurisdiction of those soviets, but previously under jurisdiction of higher-level soviets.

Sectors of the economy involved in serving the public and the entire large-scale network of social-and-cultural institutions have by and large been concentrated under the jurisdiction of local soviets. A major portion of expenditures of the state budget for health care (87 percent of all expenditures for these purposes) and for education, not including science and VUZ's (61 percent), is financed from local budgets, which comprise 14.4 percent of the size of the USSR state budget and 32.8 percent of the budgets of the union republics. Local budgets maintain almost 730,000 social-and-cultural and other budget-financed institutions, or more than 87 percent of their total number. Local budgets are almost the sole source of financing of state expenditures for development of housing and municipal service operations (except departmental operation), for consumer services to the public, trade, local industry, the fuel and peat industry, and the building materials industry.

The transfer of enterprises to the jurisdiction of local soviets has helped to broaden the rights of the latter in management of that segment of the economy and has also considerably increased the financial resources of local budgets and strengthened their revenue base. For example, payments from profit from

enterprises under local jurisdiction increased in local budgets from 3.5 billion rubles to 11 billion rubles. In accordance with the decision of the May (1982) Plenum of the CPSU Central Committee, beginning in 1983 the financing of resources annually appropriated by the state in the amount of 3.3 billion rubles to low-profit kolkhozes to make planned outlays for construction of housing, children's preschool institutions, clubs, municipal service facilities, on-farm roads, and also to maintain and equip kindergartens, day nurseries, Pioneer camps, cultural and educational institutions, and to pay insurance premiums, was transferred to local budgets. Although this measure does not broaden the source of revenues of budgets, but extends to local government authorities the opportunity to have a more vigorous influence on decisions concerning development of rural cultural and consumer service institutions, it does increase their financial capabilities.

The financial ties of local budgets with production associations and enterprises under higher jurisdiction have been considerably broadened. Kray, oblast, okrug, rayon, and city soviets have been granted the right to obtain a portion of the profit of enterprises under republic (union republic) jurisdiction. The rates of the deductions and procedure for their collection are set forth in the legislation of the union republics. This gives local soviets a greater interest in the results of financial and economic activity of republic enterprises and organizations and affords the possibility for the latter to take an active part in development of the local economy.

Collections of deductions from profit of enterprises under republic jurisdiction to be paid into local budgets were planned in the amount of 2.4 billion rubles for 1985. For example, in UkSSR deductions are made to local budgets from payments made out of profit of enterprises under republic jurisdiction in 12 ministries. In GSSR these deductions have been established from enterprises in light industry, the food industry, the meat and dairy industry, and the timber-lumber and woodworking industry, in AzSSR from enterprises in the timber and lumber industry, highway transportation, and the meat and dairy industry, in ArSSR from enterprises in nonferrous metallurgy, the building materials industry, the fishing industry, and highway transportation. The same deductions are also made in other union republics.

Another important measure is to grant local soviets the right to guide the operation of local state insurance authorities and to render them assistance in accordance with their powers. The decision has been made that local soviets may channel into their budgets a portion of the profit of the republic's main Gosstrakh administration. The transfer of funds is made by means of deductions from the total amounts of insurance premiums collected in the soviet's jurisdiction. These deductions for 1985 were planned in the amount of more than 500 million rubles.

Along with these, new and supplemental channels have been established for financial ties between local budgets and the enterprises and economic organizations located in their jurisdiction. For instance, in order to give local soviets greater motivation to improve the quality of products produced by enterprises located in their jurisdiction, a decision has been made to credit to local budgets a part of the additional profit enterprises under union and

republic jurisdiction obtain from the sale of highly efficient new products for production and technical purposes as well as a portion of the funds from introduction of supplements to retail prices on new products of improved quality. These deductions are made at rates of 10 and 50 percent of that portion of additional profit and supplements, respectively, which under legislation in effect are credited to the USSR state budget.

The forms and methods of transferring the turnover tax, which, as is well known, is a nationwide state revenue, are being broadened. A majority of those who pay it are now concentrated in cities under republic, kray, and oblast jurisdiction. In rural rayons the turnover tax is collected as a rule only in the sale of grain products, textiles, and the operations of enterprises of local industry and amounts to only 6-15 percent of the total turnover tax collected for the entire territory of the kray or oblast. Accordingly, a special procedure has been established for crediting it to the budgets of rural rayons and village and settlement budgets.

In order to create an economic motivation on the part of those local soviets in whose jurisdiction there are no taxpayers or very few, to expand commodity sales and consequently to fulfill the overall plan of the turnover tax for the kray or oblast, a portion of the tax is transferred from republic, kray, and oblast budgets to the budgets of rural rayons depending on the retail commodity sales of consumer cooperative organizations. A portion of the turnover tax is transferred from rayon budgets according to the same procedure to village and settlement budgets.

The following procedure has been established in order to increase the economic motivation of local soviets to utilize more fully the unused potential for increasing the volume of production, especially of consumer goods, by seeking out local raw materials and production waste and by bringing pensioners and disabled persons into the workplace, as well as to strengthen the revenue base of local budgets. Beginning in 1985 the turnover tax payable by enterprises of local industry, consumer services to the public, and consumer cooperatives are to be transferred entirely to the revenues of local budgets according to where the taxpaying enterprise is located. It is accordingly necessary to invigorate the activity of local soviets and the relevant departments in this direction. The relative share of products manufactured by local industry from local raw materials and production waste in 1985 amounted to only 9.4 percent of the total volume of products they produced in the country as a whole in 1985, and in certain republics it was still lower (4.2 percent in TaSSR, 4.7 percent in ESSR, and 2.6 percent in TuSSR). Use made of the work of disabled persons and pensioners is extremely low. For example, in GSSR (Minmestprom) cottage industry workers represent 4.8 percent of all industrial production personnel proper, and this figure is 9.5 percent in ArSSR and 11 percent in ESSR.

Steps have been taken to guarantee union republics and local soviets equal conditions in channeling revenues from overfulfillment of the plan for the turnover tax into their budgets.

Previously, above-plan collections of the revenue tax were credited to every budget in proportions fixed when they were established. In 1984, for example, these proportions varied from 49.7 to 100 percent for budgets of union republics and from 1 to 100 percent for local budgets. Under these conditions the union republics and also local soviets received differing amounts of funds for their own disposition when the plan for the turnover tax was overfulfilled by exactly the same amount.

It has been provided that beginning in 1985 50 percent of the turnover tax collected in the territory of a republic over and above the planned amounts, except for the turnover tax collected from enterprises of local industry, consumer services to the public, and consumer cooperatives, must be credited to the revenues of budgets of all union republics. The planned and above-plan collections on these amounts of the turnover tax are entirely credited to the revenues of the respective local budgets.

On the basis of local conditions permanent rates have also been established for crediting above-plan collections of the turnover tax to the budgets of autonomous republics and to local budgets. This gives an opportunity to councils of ministers of union and autonomous republics and ispolkoms of local soviets of people's deputies to channel into their own budgets transfers from the turnover tax in proportions necessary to covering all planned expenditures and the same share from amounts representing overfulfillment of the plan for the turnover tax.

Consistent implementation of the decisions of the party and government adopted in recent years concerning expansion of the economic and financial powers of local soviets and the changes made in the procedure for crediting particular revenues to the budget (the principal ones have been enumerated) have substantially strengthened the material and financial base and substantially expanded their budgetary capabilities.

We have essentially eradicated the subsidy financing of local budgets. At the beginning of the seventies more than half of the budgets of rural rayons and more than 30 percent of village and settlement budgets were receiving a subsidy from higher-level budgets, and the total size of subsidies averaged 17-20 percent of those budgets, and in certain rayons it went as high as 60-70 percent. At the present time, although expenditures have risen, only 205 budgets out of 52,400 are in need of a subsidy. These are mainly the budgets of certain rayons in the Far North of RSFSR, desert rayons of KaSSR and TuSSR, and certain health resort cities and settlements of LiSSR.

Thanks to the measures which have been adopted, the financial base of local soviets has been strengthened. All measures envisaged by the plan for economic and social development are being financed out of local budgets: It has become possible to allocate annually on the basis of overfulfillment of the plan for revenues substantial funds (2 billion rubles or more) to provide social amenities in settlements, to acquire equipment for social welfare and cultural institutions, and for other needs that arise during fulfillment of the plan and the budget.

The formidable tasks facing our people in the 12th Five-Year Plan in acceleration of socioeconomic development, all-out intensification of production, and raising production efficiency in order to steadily raise the population's material and cultural level of living require further invigoration of activity and greater responsibility of local authorities in management of economic and social welfare and cultural construction, a broadening of their rights in the planning and management of branches directly related to meeting the needs of the public. Ispolkoms of local soviets need to have a greater role in guaranteeing comprehensive economic development within their jurisdiction and optimum utilization of labor, raw material, and fuel-and-energy resources, as well as in improving the activity of the entire economy located in their jurisdiction.

M.S. Gorbachev, general secretary of the CPSU Central Committee, said in the third session of the USSR Supreme Soviet 11th Convocation: "We have been emphasizing again and again that the soviets at all levels are expected to make use of the rights they possess far more fully and consistently. All the spheres of social life should be within their field of vision. Particular attention should be paid now to satisfying the diverse needs and demands of the workers.... It is important that the soviets become fully involved in organizing the production of consumer goods by all industrial enterprises regardless of their departmental subordination."

The budget rights of local soviets mainly correspond to the tasks that have been set for them. But further expansion of their economic and administrative rights inevitably requires improvement of financial powers, forms, and methods of building revenues of local budgets. The task is not only to give local soviets greater motivation to improve the operation of all enterprises and organizations located in their jurisdiction regardless of departmental subordination. Local soviets have to exert a greater influence on the financial and economic activity of the latter, their revenue base must be made dependent upon fulfillment of plans for the most important economic and financial indicators, profitability and accumulation above all.

In what direction should the effort be made to solve this most important economic and social problem? First of all, the question of broadening the segment of the economy under jurisdiction of local soviets should not be removed from the agenda. On the contrary, it is becoming more relevant than ever. Work should continue to transfer associations and enterprises whose products (work and services) are used predominantly to meet the needs of the population of the autonomous republics, krays, oblasts, okrugs, rayons, and cities under republic (union republic) jurisdiction to republic (autonomous republic) and local jurisdiction. This is the most effective way of broadening the organizational and legal capabilities of local soviets in management of the economy and in guaranteeing growth of the revenue base of budgets.

Substantial changes in the size of that segment of the economy subordinate to local soviets will take place in connection with fulfillment of the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Further Improvement of Management of the Agroindustrial Complex" and creation of the USSR union republic gosagroprom, which undoubtedly will involve changes in the

composition of revenues and expenditures of local budgets. There is a need to work on and resolve a number of issues in the area of planning and distribution of profit and establishment of interrelations between agroindustrial associations and local budgets.

Second, new financial relations are needed between local bodies of government and enterprises under union jurisdiction in order to strengthen the dependence of the revenues of local budgets on the economic performance of associations (enterprises) and the increased interest of local soviets in production of consumer goods.

For enterprises under republic jurisdiction which are mainly producing consumer goods the question is settled by establishing deductions to local budgets from the payments made out of profit into the republic budget. For enterprises under union jurisdiction principally producing products for production and technical purposes, the matter is more complicated. In 1985, with consent of the councils of ministers of union republics, an economic experiment was carried out in certain oblasts and in GSSR and ESSR, which are not divided into oblasts, to transfer to associations and enterprises belonging to industry under union jurisdiction deductions to local budgets at a rate not to exceed 10 percent of the profit obtained mainly from selling consumer goods. The experiment involved 241 production associations and enterprises in the industrial sector and 28 USSR industrial ministries and departments. In 1985 they channeled deductions from profit into 101 local budgets, at a rate of 5 percent into 25 local budgets of UkSSR, and at a rate of 10 percent of profit to the other 76 budgets. This is making it possible for the respective local soviets to exert a more vigorous influence toward improvement of the economic and financial activity of enterprises under union jurisdiction. The ispolkoms of the local soviets can commit a portion of the profit of enterprises under union jurisdiction to finance expenditures for development of the local economy and social welfare and cultural programs in accordance with the plan for economic and social development of the city, rayon, or oblast.

The preliminary results of the experiment show that the local soviets to whose budgets deductions from the profit of associations and enterprises under union jurisdiction were transferred and the financial authorities monitored the activity of those economic entities more closely. Measures are being carried out which are helping to expand the production of consumer goods at enterprises under union jurisdiction, to improve their quality, expand their assortment, and, as a consequence, to increase the revenues of local budgets on that basis. For example, in UkSSR the additional assignment for production of consumer goods for the first half of 1985 was broken down among 1,147 enterprises under union jurisdiction, which represents 88 percent of their total number, and the total amount in retail prices was 208.4 million rubles or 21.1 million rubles more than for the same period of last year (11.3 percent). Sales of those products brought into the budget an additional 33.8 million rubles. The plan for the manufacture of consumer goods at those enterprises was exceeded for the first half of 1985 by 116.2 million rubles (55.8 percent of the annual assignment).

Ispolkoms of local soviets have been taking up issues concerning the performance of enterprises under union jurisdiction and have been taking steps to expand the production of consumer goods, to improve their quality, and expand their assortment, and also to fulfill plans for profit and transfers from profit to the local budget. For example, the Ispolkom of the Kiev Oblast Soviet of People's Deputies has taken up matters related to additional steps to improve the supply of consumer goods to the oblast's population, of progress in fulfilling targets for their above-plan production, and for improvement of their quality and assortment at the "Irpen'mashtorf" Plant of Minstroydormash and the Belaya Tserkov "Elektrokondensator" Plant of Minelektrotekhprom. The Makarovskiy Rayon Ispolkom took up the question of the Kodra Glass Plant of Minmedprom and the Plokhityanskiy Antibiotic Feed Additives Plant of Glavmikrobioprom with respect to the production of consumer goods. The question of the financial and economic performance of a refrigerator plant of Minlegpishchemash which has not been fulfilling the profit plan was taken up in the session of the Vasilkov City Soviet. In all cases the appropriate decisions were made. A similar effort is also being carried on by local soviets of Zaporozhe Oblast and other oblasts in the Ukraine.

Reports have been made to the Ispolkom of the Voronezh City Soviet on fulfillment of the plan for payments from profit of enterprises under union jurisdiction. An order was adopted requiring directors of the tire plant, the furniture combine, the Production Association for Manufacturing Forging and Pressing Equipment imeni Kalinin, and others to find out the causes of nonfulfillment of the profit plan and take steps to fulfill all technical-and-economic indicators and discharge obligations to the budget. In July these questions were taken up in a session of the planning and budget commission of the city soviet.

At the same time, along with the constructive aspect of the conduct of the experiment, there were also difficulties. Pursuant to the procedure in effect profit from sale of consumer goods is not planned separately in the plan for economic and social development nor in the financial plans of ministries, associations, and enterprises. It is not indicated separately in the accounting and reporting of enterprises, since this would involve a considerable increase in the amount of work. A decision was therefore made for transfers to local budgets to be provided for in 1985 as part of the entire amount of profit of enterprises under union jurisdiction, rather than within the profit they obtained from sales of consumer goods.

In the period of writing the draft of the USSR state budget and also the drafts of the budgets of union republics and local budgets ministries and departments still did not have the profit plan for enterprises under union jurisdiction. That is why transfers to local budgets are determined on the basis of the profit plan for the past year, which has made it necessary to make changes in local budgets.

As a rule enterprises under union jurisdiction are located in large cities which have an adequate revenue base for financing expenditures in accordance with the plan for the city's economic and social development. When deductions from the profit of enterprises under union jurisdiction were transferred to

local budgets participating in the experiment, a surplus of revenues over expenditures was created for many of them that was subject to confiscation into the higher-level budget. The size of transfers to those budgets from nationwide state taxes and revenues was substantially reduced.

When settlements were made during the year with local budgets related to transfers from the profit actually obtained enterprises under union jurisdiction raised the question of not applying those deductions to additional profit, which is earmarked. For example, to the profit obtained from incentive supplements to the wholesale prices on products for production and technical purposes, from carrying out organizational and technical measures and profit committed to making up the shortage of own working capital, from working Communist Saturdays, and so on. Accordingly, USSR Minfin issued instructions to financial authorities not to take into account this additional profit when enterprises make settlement with local budgets.

A number of enterprises under union jurisdiction failed by a substantial margin to fulfill plans for accumulation and payments into the budget assigned them on the basis of the volume of production of their principal product. For this reason local soviets failed to receive large amounts of revenues into their budgets, and this has been creating difficulties in providing the financing for expenditures called for in the plan. For example, the Rossosh Chemical Plant imeni 60-Letiya SSSR, located in Voronezh Oblast, was assigned a profit plan for 1985 of 23.7 million rubles, and transfers to the budget of the city of Rossosh 2.3 million rubles, which represented 57.5 percent of the total revenues to the city's budget. Instead of profit the plant had losses of 3.6 million rubles in the first quarter. As a result planned measures were not financed. A similar situation came about for the budget of the city of Fokino in Dyatkovskiy Rayon in Bryansk Oblast.

Ispolkoms of these city soviets have more than once taken up the financial and economic performance of enterprises, but they were unable to provide effective help or exert substantial influence on the state of affairs in the organization of production and the supply of raw materials and supplies. Accordingly, USSR Minfin was forced to exclude these enterprises from participation in the experiment and to compensate the budgets of the cities of Rossosh and Fokino the lost revenues from the resources of the union budget.

So that a more detailed study might be made of the influence of the experiment on local budgets, provision was made in the draft of the USSR state budget for 1986 to continue the experiment for those same local budgets as last year. The intention is to work out all the details of the interrelationships that arise under the new conditions between the local soviets and enterprises under union jurisdiction with respect to planning and recording production and financial indicators (in particular the indicators related to the production of consumer goods), organizing monitoring of their performance, and also forms and methods whereby local soviets can aid enterprises in matters of the development of production, increasing production efficiency, the growth of accumulation, and so on.

The main thing in conducting the experiment is to see how much the new system of financial relations between local soviets and enterprises under union jurisdiction contributes to a rise in the operating efficiency of enterprises under union jurisdiction and consequently to the growth of revenues of local budgets.

If all the questions that have been raised are constructively solved during the experiment and the new type of payment into local budgets is established everywhere, then the revenue base of local soviets will be substantially strengthened. There will be an increase in the number of sources of revenue and an expansion of the number of taxpayers paying revenues into the local budget. The local soviet will have a greater opportunity to display its organizational ability and to guarantee not only fulfillment, but even overfulfillment of the plan for collection of revenues of the local budget. Under current legislation all revenues additionally collected in carrying out the local budget and amounts whereby revenues exceed expenditures forming in a budget at the end of the year as a result of overfulfillment of the revenue plan remain at the disposition of the local soviet. These resources can be committed to additional outlays to develop the local economy and to social welfare and cultural measures, including capital investments over and above the established limits.

Establishment of additional financial relations of local soviets and their budgets with enterprises under union jurisdiction should in our opinion pursue other directions as well. A certain percentage of the profit which enterprises under union jurisdiction obtain from production and sale of consumer goods (manufactured under additional targets assigned by local soviets) could be credited to the budgets of local soviets over and above those credited under the experiment. Or again, in order to increase the motivation of local soviets, transfers should be made to their budgets of the amount of turnover tax collected from the sale of above-plan commodities and commodities manufactured under additional targets assigned by local soviets.

Adoption of these proposals would promote not only a strengthening of the financial base of local soviets, but also a considerable growth of their interest in additional production of consumer goods needed by the population from local resources. At the same time, there is a need to introduce separate recordkeeping on costs, proceeds, and also collection of the turnover tax on consumer goods manufactured under additional targets.

In our opinion it would also be worthwhile to discuss other proposals, for example, crediting to local budgets a percentage of the turnover tax corresponding to the actual volume of production of consumer goods. Adoption of this proposal does not require additional recordkeeping and reporting, nor would changes have to be made in planning the production of goods. Assignments for the production of consumer goods and consequently reporting on their fulfillment are now given by respective territories to all enterprises and organizations regardless of their departmental subordination.

At the same time, local soviets become more interested in the production not only of tax-intensive and high-revenue goods, but also those goods which do

not afford profit, but which the population needs. In addition, to a considerable degree there will be greater interest and responsibility on the part of local soviets in fulfillment of the plan for commodity sales.

In our view the present practice should be expanded of transferring the turnover tax to local budgets as a function of fulfillment of the retail commodity sales plan as is the case with budgets of rural rayons and village and settlement budgets as a function of fulfillment of the commodity sales plan of consumer cooperatives. To that end such transfers might be established to the budgets of cities and settlements which do not have enterprises which are payers of the turnover tax in a percentage of the retail commodity sales plan for enterprises and organizations in state trade.

We should dwell in particular on a source of revenue like payments into the local budget of the charge for water which industrial enterprises take from water management systems. Under the current regulation 50 percent of the water charge is credited as a revenue of local budgets. The purpose of introducing this payment in 1981 and of transferring a part of it to local budgets was to help to strengthen the fight for water conservation and also to make revenues of local budgets more dependent upon the operation of enterprises located in their jurisdiction regardless of departmental subordination.

Experience has shown that this increases the revenues of large cities which at that point had enough revenues of their own from other sources. Medium-sized and small cities and also rural rayons received practically no additional revenue from introduction of the water charge. For instance, in RSFSR the average local budget received only about 40,000 rubles of revenues from the water charge, including slightly more than 10,000 rubles for rayon budgets.

At the same time, in large cities and industrial rayons where a large number of industrial enterprises are concentrated this source represented a sizable percentage of budget revenues. Difficulties frequently arose in performance of budgets. The reason was that in the context of the competition for conservation of physical resources and reduction of expenditures for industrial consumption, in which every enterprise and the national economy as a whole have an interest, local budgets failed to receive the revenues that had been planned; they experienced a reduction of their financial resources. For example, in connection with water conservation at industrial enterprises of Moskvoret'skiy Rayon in the capital the plan for payment of the water charge fell 2.5 million rubles short of fulfillment, and the rayon budget failed to receive 1.25 million rubles. As a consequence the revenue plan fell 350,000 rubles short of fulfillment and only assistance from the higher-level budget made it possible to finance all the measures planned and those which arose in addition to the plan. Moreover, the procedure for crediting the water charge brought about an unjustified increase in paperwork and correspondence in enterprises, financial authorities, and Gosbank institutions concerning this matter.

It is accordingly advisable for the charge industrial enterprises pay for water to go into the union, republic, or local budget depending on the subordination of these enterprises.

Statements have recently begun to appear in the press to the effect that the revenues of local budgets, especially village and settlement budgets, are to be built up from the transfers of resources made by enterprises and organizations located in their jurisdictions as a function of the number of workers and employees or simply in the proportions necessary for development of the social welfare and consumer service infrastructure in the relevant area (rayon, city, village, or settlement). Moreover, such deductions paid into local budgets are not linked to the needs for resources for development of the local economy in accordance with plans for the economic and social development of the country as a whole and the respective territory, nor are they made dependent upon the contribution of the local soviet to increasing the effectiveness of performance of those enterprises and organizations.

In our opinion, the questions of further expansion of the independence of local soviets both in the area of economic planning and also finance should be settled solely on the basis of the principle of democratic centralism, which lies at the basis of our state's entire activity. The USSR state budget is and should remain the principal financial plan for the formation and use of the statewide fund of money resources of the Soviet state.

The state budget is the most important economic instrument in the hands of the state for intensification of production. Local budgets should perform the same role with respect to local soviets. There is no doubt that the measures being taken to expand the financial powers of local soviets should help to broaden their monitoring functions and create the conditions for more effective influence to be exerted toward improvement of the financial and economic performance of enterprises and organizations.

This is the right way to achieve the growth of even that portion of the national income which can be concentrated in the USSR state budget and consequently also in the budgets of the union republics and local budgets for commitment to the financing of measures provided for in the plan for economic and social development of union republics, krays, oblasts, okrugs, cities, rayons, and village and settlement soviets.

The material of the 27th CPSU Congress has emphasized the need for further invigoration of activity and expansion of the rights and enhancement of the responsibility of local soviets of people's deputies in mobilizing additional unused potential and capabilities for economic growth, for improvement of the qualitative indicators of economic activity, and for fuller satisfaction of the population's material and nonmaterial needs. Performance of the tasks facing soviets requires they strengthen economic methods of influencing the performance of associations, enterprises, and organizations located in the respective jurisdiction.

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RESOURCE UTILIZATION AND SUPPLY

ECOLOGICAL ASPECTS OF INTENSIFICATION EXAMINED

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[Article by Yu. Chernegov, department manager of SOPS [Council for the Study of Production Forces]: "The Ecological Aspects of Intensification"; capitalized passages printed in boldface]

[Text] Economics and ecology....Where the economy operates primarily on the principle of extensiveness, there is a standing, perhaps stereotypic, notion that the two contradict each other, are the opposite of each other. Under the influence of such stereotypes, the economy is perceived as something that inflicts only harm on nature. At the same time, it is customary for certain managers to harbor the thought that protecting the environment prevents the development of the economy and requires "excessive" expenditures, and that these expenditures reduce production effectiveness.

In an era of overall intensification of production, such obsolete stereotypes can have no place in making decisions on environmental protection and should be overcome absolutely. Based upon wide use of the newest achievements of scientific and technical progress--and this is a characteristic feature of intensification--the mutual relations of the economy and ecology are changed fundamentally. There arises the possibility of creating a new and progressive technology, a set of equipment that is suitable for it, and a production facility that is based thereon, all of which in their very essence will be, as it is customary to say, ecologically pure and will not harm the environment. The simultaneous solution of economic, technical, organizational and ecological problems of developing social production at less cost than before becomes realistic.

Existing experience in restructuring production work that is based on intensiveness indicates convincingly that solving problems of ecology and the economy, based upon a fundamental technical updating of production facilities, proceeds in a single direction.

The Oskol Electrometallurgy Combine, where production without the blast furnace has enabled discharges of harmful waste gases into the air to be sharply reduced, is indicative. The Pikalevo Alumina Combine in Leningrad Oblast, which uses a raw material poor in aluminum content, is one of the country's most profitable. Wastefree integrated processing of raw materials for producing alumina, chemicals and building materials, has been achieved here. A

technology for producing formcoke, under which waste gases are used completely in the production processes, has been created and realized. These examples could be continued.

Thus, the new approach to the solution of ecological tasks is organically incorporated into the logic and practice of building an intensive production base.

Achievements and Problems

The new look at the mutual tie between economics and ecology should not be perceived as the result of some sort of major shortcomings or failures in nature-conservation activity. The new approaches and the potential for their practical realization have been derived objectively from the degree of development of social production and the scientific and technical progress that have been achieved. So the task is that of using these opportunities everywhere, on a large scale and in a mass-production procedure, without wasting any time.

Our country can justly be proud of its achievements in the nature-conservation sphere and in the development and confirmation of the principles of the rational socialist management of nature. The ecological situation in the USSR is, as a whole, relatively favorable in comparison with other industrially developed countries of the world. This is explained, on the one hand, by the large dimensions of the territory and the enormous reserves of natural resources. And, on the other, by the fact that we began to take nature-conservation measures before most other states did.

An especially large amount of work has been done in this direction in recent years. Legislative enactments have been developed and steps have been taken to develop the management, planning and monitoring of environmental protection. Appropriate subunits have been established at the various control levels. All these measures have enabled positive achievements in the rationalization of nature management to be achieved during a period of further growth of industrial and agricultural production, increased urban development, and an increase in population. The condition of the Black Sea, the Sea of Azov and the Baltic and Caspian Seas and of such large rivers as the Volga, Moscow, Dnepr, Kama and Don has been improved.

However, what has been achieved is no cause for complacency. Not only because there have been many deficiencies and cases of irresponsible, listless and parochial attitudes toward natural resources and the environment here, but also because progress in science and technology is opening up new horizons for nature-conservation activity.

Questions of a comprehensive study of ecological problems, taking the achievements of scientific and technical progress into account, acquire special urgency today because a decision to prepare a long-range state program for preserving the environment and for making rational use of the USSR's natural resources has been adopted.

In order to generate a correct natural-conservation policy, first of all the place where all the sources of pollution get their start and the scale of that pollution must be understood. Undoubtedly, the products of nature are this common primary source. All the rest--the smoke from plant smokestacks, polluted water and the land occupied by dumping grounds--are the result of processing them. Thus the mining industry and the construction field take from the ground each year about 20 billion tons of mineral raw materials, of which 5-10 percent is converted into output, according to various estimates. The rest goes into tailings, dumps and storage or turns into ashes and cinders and is ejected into the atmosphere and water.

Agriculture takes about 2.3 billion tons of biomass annually from nature, of which about 11 percent is converted into output. All types of soil erosion add another 1.5 billion tons of pollution. And finally, in the lumber industry, the biomass obtained at the felling areas weighs just a bit less than 0.5 billion tons. Finished output is obtained from 26-27 percent of it by weight.

It is apparent from these data that the main, primary source of environmental pollution is the complex of production facilities associated with the extraction and processing of mineral raw materials. The branches that base their operations on it--power engineering, metallurgy and mining--predominate in our national economic structure. For example, USSR mining-industry output is 26 percent of worldwide production.

The USSR generates more electricity than all the countries of the European Economic Community combined. Ferrous metals are smelted in amounts that far exceed the amounts ever produced by the USA and Japan, not to mention other industrially developed countries.

The high intensiveness in materials and energy of our production facilities leads to an excessive extraction of useful minerals and the processing and combustion thereof. This adds to the volume of dumps of dead rock, gangue, ash and slag and of harmful discharges into the water and the air.

There are also complicated economic consequences from the extraction and consumption of mineral raw materials in the contemporary amounts and forms. During the last five-year plan period, 45 percent of all capital investment in industry was aimed at mining-industry needs. This magnitude is explained not so much by large production volume as by the need to spend additional resources on increasing the depth of mining operations in order to maintain production at the achieved level and to assimilate new fields. This is an exorbitantly heavy burden on our economy, which constrains flexibility in the use of resources for developing more progressive branches of the economy.

The Main Thing Is to Revise the Production-Facilities Structure

What is the way out of the situation that has been created?

A fundamental solution of the problem is to base production as much as possible on raw materials that are relatively easily accessible and that exist in adequate amounts, in reducing the specific consumption of raw materials, in providing for the recycling of raw materials, in utilizing secondary resources, and in using completely everything that is taken from the ground,

based upon comprehensive processing of the material mined. This means a restructuring of the consumption and raw-materials processing structures and the creation of technologies that allow the least requirements for raw materials and that also allow for the use of substitutes for scarce raw materials.

Problems of restructuring the consumption and production structures are worrying the whole world. The developed capitalist countries are striving greatly to resolve them by moving polluting industries, including the mining and extractive industries, to the developing countries. For the world as a whole, and especially for the socialist world, this is not the way to solve the problem. We must seek our own paths.

Studies performed by USSR Gosplan's Council for the Study of Productive Forces (SOPS) indicate that it is desirable, when examining structural problems in the nature-conservation sphere, to rely upon four possible types of conversions established by science.

The first and most significant is the establishment of new areas of use for various products and natural resources and the creation of the best functional structure for existing production or consumption.

Let us take, for example, metal. A fourth of it goes into construction. Here the use of two-story and three-story construction of the cellular type is extremely effective. The build-up density in cities, according to specialists' calculations, is not reduced in comparison with modern 6- to 9-story housing. It is also significant that low-rise apartment houses can be erected without sacrificing quality, with materials produced from the waste of metallurgical and power plants and from stripped rock, thus reducing the demand for metal.

Such cities are not fantasies by any means. Designs of apartments for the new buildup have been developed already but they still are not being built.

Metal consumption could be reduced considerably also by increasing its quality by using niobium as an alloying additive. According to assessments, the consumption of just 20,000 tons of niobium would allow steel consumption to be cut by one-third without degrading the strength characteristics of the materials. Niobium can now be extracted basically as an accessory metal during the processing of complex ores.

Solving the problems on the basis of the first type of transformation is the most suitable path, since the effectiveness of production expenditures increases by factors of tens and even hundreds.

The second type of conversion is based upon the use of a new and more effective physical, chemical or biological principle of operation of various production facilities or processes. The improvement of methods for purifying water by transferring from evaporative systems to membrane technologies can be cited as an example. Cost effectiveness in solving problems of this class increases 8-fold to 10-fold.

The third type of conversion is associated with the use of the most effective technical solution for a selected, let us say, physical operating principle.

An example is the comprehensive utilization of mineral raw material. The technical solutions that have been created that realize the principle of making comprehensive use of these materials enable the national economy's requirements to be met completely with much less material mined than at present.

And, finally, the fourth possible conversion method is linked with optimization of various known technical solutions for a given parameter. Such an approach can cut costs as much as 15-20 percent for some industrial processes. This conversion potential must, of course, be used completely, the more so since great savings are achieved.

The problem is to find for each branch of the national economy, for purposes of rearranging structures, all the indicated possibilities for transforming the extraction and consumption of raw materials and the production and consumption of output. Since the possible measures cannot be fully realized in a short time, a well-grounded assessment of priorities in nature-conservation activity and precision in long-range planning are necessary.

Analysis indicates that proper use still is not being made of realistic solutions that are available today. Thus, one can convert to the use of basalt fiber instead of asbestos. Inexpensive and widely available rocks--basalt and crystalline schist--are used in making it.

Another example. Kharkov scientists have created a technology for extracting graphite from the fly ash of metallurgical plants. Introducing it would allow the mining of graphite ores to be dispensed with, the storage of production waste to be eliminated, and the state of the atmosphere to be improved. The job, consequently, is to make active use of existing innovations.

The Integrated Interbranch Approach

SOPS's experience in long-range developments on matters of nature-conservation activity has shown the difficulties that exist here. Most ministries, agencies and Union-republic gosplans strive to bypass concrete long-range solutions. They are replaced ordinarily by a general formulation of the question and a listing of desirable measures, without an indication of the results.

At the same time, there are developments of very high quality in Minstankoprom [Ministry of Machine Tool and Tool Building Industry], the Moldavian SSR and the Urals region. Thus, the unsatisfactory status of long-range planning in other agencies and regions can be explained mainly by subjective factors, the passiveness of personnel, and the well-known stagnation of ecological awareness.

THE FACT THAT ARRANGEMENTS FOR NATURE-CONSERVATION ACTIVITY ARE DEVELOPED MOST POORLY IN THE MINISTRIES AND ENTERPRISES THAT HAVE THE MOST UNDESIRABLE EFFECT ON THE ENVIRONMENT--USSR MINENERGO [Ministry of Power and Electrification], USSR MINCHERMET [Ministry of Ferrous Metallurgy], USSR MINTSVETMET [Ministry of Nonferrous Metallurgy], MINKHIMPROM [Ministry of Chemical

Industry], AND MINUDOBRENIYE [Ministry of Mineral Fertilizer Production]--
GENERATES SPECIAL CONCERN.

Not enough attention is being paid yet to these questions in the technology and methodology of planning. Thus, a chapter on natural-environment conservation still has not received the rights of citizenship in preplanning papers. This chapter was omitted during coordination, for example, of methodics instructions for the preparation of general, branch and regional schemes for developing and deploying the country's productive forces during the period up to the year 2005. Concrete instructions on the procedure for validating the system for nature-conservation methods are replaced by general formulations. It is desirable also to speed up the development of capital-investment norms for these measures, which, under the current state of affairs, will not appear until 1988.

A comprehensive interbranch solution of the nature-conservation problems for the various regions is nowadays becoming of special importance in both current and long-range planning. In most cases, comprehensive regional schemes for nature conservation still have not been developed.

The need for the integrated regional approach can be pointed out in the example of introducing low-waste and wastefree technologies. Primarily, certain enterprises and branches are now busy creating them within the framework of their own industrial processes, without considering the potential and the requirements of other branches. And it is precisely along these paths that the greatest reserves are concealed.

What have SOPS's rough calculations for the long term shown? MEASURES THAT WILL ENSURE THE CURTAILMENT OF DISCHARGES OF UNPURIFIED WATER EFFLUENT, THE PREVENTION OF ALL TYPES OF LAND EROSION, AND THE FLOODING, SALINATION, SWAMPING AND DESSICATION OF LAND COULD BE COMPLETELY PERFECTED BY THE YEAR 2000, IF THEY ARE INCLUDED IN THE LONG-RANGE PLAN. THE FULL RESTORATION TO AGRICULTURAL USE OF LAND THAT HAD BEEN VIOLATED DURING MINING OPERATIONS AND REFORESTATION IN AMOUNTS THAT WILL COMPENSATE FOR TREE FELLING, AS A RESULT OF ALL TYPES OF NATURAL EFFECTS AND THE GEOMORPHOLOGICAL VIOLATION CAUSED BY MAN'S PRODUCTION ACTIVITY, ARE POSSIBLE. DISCHARGES OF POLLUTING SUBSTANCES INTO THE ATMOSPHERE AND THE UNUSED PORTION OF SECONDARY RESOURCES CAN BE REDUCED BY HALF. LOSSES OF USEFUL MINERALS DURING EXTRACTION, PROCESSING, TRANSPORTING AND UTILIZATION WILL BE REDUCED.

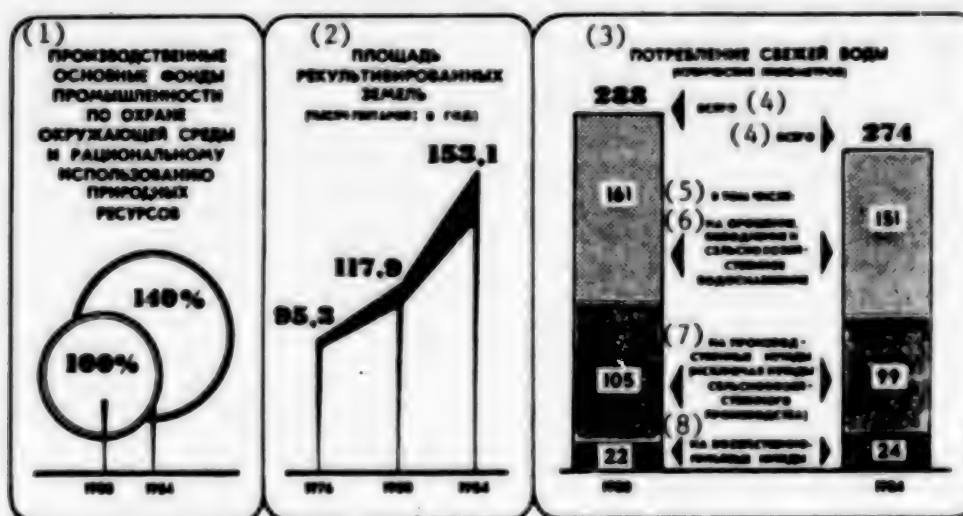
Reaching the standard level of effects in all natural spheres in the next 10 years is realistic, despite a further growth in production volume. And then the development of nature-conservation activity will move to a qualitatively higher level--into the area of improving the environment.

However, a solution to the problem of making complete use of solid-mineral residues which are formed during extraction, refining and consumption of useful minerals will not be provided for in the foreseeable future. Developments that have been carried out up to now promise in the long term a 25-30 percent reduction in the enormous amount of dead rock mined, through the creation of low-waste and wastefree technologies and the integrated use of raw materials where the amounts of useful minerals mined is stabilized. But

for most types of mineral raw materials, an increase in the extraction thereof and in the specific output of dead rock for each ton of useful minerals mined is forecast. This makes evident the urgency of solving problems of revamping the structure of production facilities that are associated with the extraction and use of mineral raw materials.

It stands to reason that scientific and technical progress will bring revisions in these prospects. And a different assessment of them also is possible. Therefore, it is necessary to fire up in every possible way the work of making up THE LONG-TERM PROGRAM FOR PROTECTING THE ENVIRONMENT AND FOR MANAGING NATURE RATIONALLY. It is necessary to involve specialists of various profiles in this research, to thoroughly analyze the existing backlog of accomplished scientific and technical developments and solutions, and to involve the broader society in a discussion of them.

Facts and Figures



Key:

1. Productive fixed capital of the industry for protecting the environment and for making rational use of natural resources.
2. Area of land restored to agricultural use (thousands of hectares per year).
3. Fresh-water consumption (cubic kilometers).
4. Total.
5. Including:
6. For irrigation, flooding and agricultural water supply.
7. For production needs (including those of agricultural production).
8. For household and drinking-water needs.

The USSR's reforestation work is among the best in the world in terms of volume. Each year about 1.1 million hectares of man-made forests are created. Substantial land areas are returned to agricultural use. As is apparent from

the diagram's data, the annual volume of work on returning land to agricultural use rose from 95,300 hectares in 1976 to 153,100 hectares in 1984.

The consumption of fresh water by industrial enterprises has been reduced by the development of circulating and straight-line water-supply systems. While 105 cubic kilometers of fresh water were used for nonagricultural production needs in 1980, 99 cubic kilometers were used in 1984. Improvement of water utilization in agricultural production and the development of irrigation systems also have been responsible to a definite extent during this period for a reduction in fresh-water consumption (see the chart).

11409

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RESOURCE UTILIZATION AND SUPPLY

SPECIAL INCENTIVES FOR RECYCLING INDUSTRIAL WASTE PROPOSED

Moscow EKONOMICHESKAYA GAZETA in Russian No 14, Mar 86 p 14

[Article by V. Gdess, candidate of economic sciences: "Reappraising Valuables"]

[Text] Our economy is now facing the problem of getting the best of the cost aspect of the economic mechanism. One of the main conditions for solving it will be the maximum utilization of recycled resources.

The 11th Five-Year Plan managed to achieve remarkable successes. Here are a few figures. The use of wood waste products increased by 1.3 million cubic meters, of phosphogypsum waste products by 1.8 million tons, of waste paper by 1 million tons, and of slag from steel smelting by 6 million tons.

However, there has still been no radical breakthrough regarding recycled resources. The level of their utilization testifies to this. Currently the economic turnover involves no more than 70 percent of wood and phosphogypsum waste products generated, 65 percent of waste paper, 40 percent of steel smelting slag, and 12 percent of thermal power plant cinders and ash. Many ministries and departments habitually fail to fulfill their plans for processing recycled materials. During the past five-year plan USSR Minneftekhimprom [Ministry of the Petroleum Refining and Petrochemical Industry] did not manage to deal with the tasks of utilizing old tires, nor did USSR Minlesbumprom [Ministry of the Timber, Pulp and Paper, and Wood Processing Industry] with wood waste products, nor Minudobreniy [Ministry of Mineral Fertilizer Production] with phosphogypsum, nor the USSR Ministry of the Construction Materials Industry with ash and cinders from thermal power plants. The examples could go on.

Unfortunately, the existing economic mechanism continues to orient industry toward primary raw materials, even when some provision is made for measures impacting on the poor use of waste products. Nominally, enterprises are responsible for not fulfilling plans for processing waste products or contracts to deliver recycled resources. For example, for breach of contract a fine is levied equal to 8 percent of the value of the undelivered waste products. Since they are cheap in comparison to primary raw materials, the amount of the fine is quite small and has no real impact on enterprises.

Likewise ineffective is the system of material incentive for the collection, delivery, and processing of recycled materials.

At first glance, enterprises are given broad opportunities for the material encouragement of their workers. The sources of funds for paying bonuses are precisely defined: profit from the sale of specific recycled resources; the portion of the consumer goods fund that is designated for paying bonuses for a product manufactured from waste products; and the material incentives fund.

However, the process of accumulating and expending funds to reward the utilization of waste products is itself imperfect.

Since, as already mentioned, the price of waste products is low, enterprises realize very modest income from selling them, and bonus funds deriving from this are small.

As a rule, no provision is made for dealing with waste products, either in amassing funds for material incentive, or in expending them. But the imperfection of this system can best be seen from the example of accumulating the consumer goods fund.

If an enterprise puts out a product where half or more of the total cost of the materials expended in its production is from waste products utilized, then profits from its sale are directed in whole or part (depending on the level of profitability relative to production cost) to the formation of a special fund to encourage the production of consumer goods from waste products. The stipulation of an obligatory 50 percent utilization of waste products can actually apply only to enterprises that process recycled materials. But they are few. In the overwhelming majority of cases the proportion of waste products in the total volume of raw material is quite small, and therefore there is no material incentive fund.

Enterprises that have converted to the new management provisions have a more favorable procedure of allotments to the consumer goods fund: for them it is sufficient to utilize at least 10 percent of waste products in production. The USSR Ministry of Finance has established a special scale by which one can determine the magnitude of allotments according to the proportion of recycled materials in the total volume of materials used. Until recently this procedure was not adopted because there was no record kept of products manufactured with the use of waste products. The appropriate statistical records keeping, which was introduced in 1986, will finally make it possible for enterprises to make use of the opportunities afforded them.

Of course, it is very important to make the system of material incentives genuinely effective. But I believe that the fundamental solution to the problem consists of a whole complex of economic measures that would orient industry toward recycled resources.

For example, in the allotments from profits available to ministries and departments means should be designated for the reconstruction of, or creation of new, capacities to collect and process recycled material.

If an enterprise embarks on the mass use of waste products, then I believe that it would make sense to set up favorable procedures for the distribution of the products that use them in manufacture. For a stated period of time these profits could be entirely directed to economic incentive funds, including at least half for workers' bonuses, and the rest for further development of the material and technical base. This would make it desirable for enterprises and organizations to utilize income obtained from delivering waste paper, recycled polymer materials, and other waste products to purchasing agencies.

But what indicators should be considered decisive for rewarding the recycling of materials?

First, the indicators of the enterprise's basic economic activities. But since we do not presently have a bonus rate for their performance, they must be regulated in accord with the performance of contract deliveries of waste products and items manufactured with the use of them. Account must also be taken of savings in material resources deriving from the amount of recycled material utilized.

A special incentive system is needed for the collection, processing, and delivery of industrial waste products, and the manufacture of goods from them based on the performance of the appropriate tasks.

It will be another important economic lever in this area to increase the responsibility of suppliers and consumers of recycled materials for infractions of the established plan tasks, norms, and procedures for dealing with them. It would make sense to levy sanctions similar to those currently applied to the uneconomical use of material resources. The similarity of measures applied is due to the same type of economic damage inflicted on the national economy in both cases as a result of excessive consumption of materials.

This is how one could look at it. An enterprise that has consumed material resources in excess of funds allotted has not fully utilized the appropriate types of recycled materials. That means it should be fined double the value of the material resources consumed in excess.

Another example. An enterprise writes off waste products generated in the process of production (which should be utilized) against the production cost of the finished product, and then destroys them or ships them to the dump. In a case like that the fine should be ten times the value of the waste products destroyed.

Quite often enterprises or organizations violate the established procedures for delivering recycled materials to purchasing organizations, mix various kinds of them together, store them incorrectly, and do not sort them, all of which hampers further processing of them. Such infractions should be fined double the value of the raw material.

It would be a highly effective measure to adopt a tax on waste products. It would be levied on enterprises not making full industrial use of the waste products they generate. The amount of the tax should obviously recognize the level of utilization of waste products at a given enterprise.

All sums derived from the adoption of a system of taxes and fines should be diverted to special regional intersector funds for developing facilities to collect and process recycled materials. The resources of these funds would be the sources for financing investment in the expansion of existing and the creation of new shops and enterprises to utilize recycled materials, including the construction of specialized intersector enterprises. Furthermore, the resources of the regional funds could be used to set up new technological processes and equipment to process recycled materials and reward the specialists that produce and adopt this technology.

There is still another aspect. At the present time there is no precise system of organizational and economic relations among the suppliers of waste products, the supply and marketing organizations that distribute them, and the consumers of recycled materials (purchasing organizations are an exception). For the rest the matter is restricted by the fact that the plan for delivering waste products is "sent down" to them. And the enterprises must independently find out whom to sell them to and solve transport and other problems. And if it is so much trouble to deliver just the planned recycled resources, what about the greater part, which are not specified in the plan?

Waste products are as much a resource as primary raw materials. And therefore all the organizational and economic processes of selling, processing, and delivering them must be regulated just the same as for primary raw materials. Furthermore, interchangeable types of primary and recycled resources (such as soda ash and broken glass, nonmetallic materials and the cinders from thermal power plants) must be regarded as the same type of raw material. But one circumstance must be kept in mind. The entire practice of planning and utilizing natural resources is based on the greatest possible economy of them. However, resources of the majority of multi-ton waste products still considerably exceed the demand for them. Therefore, there should be planning for the use of primary resources and the corresponding delivery of them only in a case where products cannot be manufactured from recycled materials or where the latter are not available in that region. But if there are enough waste products and the technology exists, why consume natural raw materials?

These provisions will make it possible to set up a system under which, as stated at the 27th CPSU Congress, the overconsumption of resources will be disadvantageous, and thrift will be tangibly rewarded.

12697
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ECONOMIC MODELING AND COMPUTER TECHNOLOGY APPLICATION

METHODOLOGY FOR CONSTRUCTING REGIONAL INDEXES DISCUSSED

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 86 pp 16-24

[Article by S. Sergeyev, candidate of economic sciences, senior researcher of IMEMO AN SSSR [Order of Labor Red Banner Institute of World Economic and International Relations of the USSR Academy of Sciences]: Improving the Methods for Constructing Regional Indexes"]

[Text] Economic indexes are one of the important tools in statistical research.

The index method is widely used by Soviet and foreign statisticians in factor analysis and in studying the dynamic pattern of economic processes. This has been set forth in sufficient detail in the literature.

Far less study has been done on the problems of applying the index method in making comparisons of different regions or places (especially international comparisons). As T. Ryabushkin, corresponding member of the USSR Academy of Sciences, has observed, for such comparisons "...the problem of selecting the optimum system of weights and of economic substantiation of some standard system of weights, along with economic substantiation of the average value of several index numbers remains the number one problem" even now.¹ Development of methods of constructing regional indexes is among the important scientific-methodological and practical problems of statistics.

Dynamic indexes are structured in Soviet statistics according to the following methodological principle: Factors are taken at the level of the base period if the indicators being indexed are quantitative and at the level of the reporting period if they are qualitative. This principle is justified by the aims of the economic analysis being conducted with the help of these indexes.

But it is not legitimate to simply carry this principle over mechanically to regional indexes which characterize the results of comparison of economic phenomena in space. The well-known Soviet statistician I. Paskhaver has written as follows on this point. "It might seem at first that the problem of regional comparisons of such averages in a dynamic framework.... But this is not the case, because there is no basis or sense whatsoever in giving preference to the weights of any one of the regional units being compared or any one of the entities being compared."²

A similar point of view has been reflected in the writings of V. Nemchinov, member of the academy, and T. Ryabushkin, corresponding member of the USSR Academy of Sciences.

The regional index characterizes the difference among the objects being compared in levels of a composite economic indicator consisting of elements that are not directly comparable (for example, the totality of products which are diverse in their use value).

The question of selecting the type of relatives (weights) and the method of computing their numerical values must be solved as a function of the goals and tasks of the analysis being done.

T. Ryabushkin has observed in this connection: "From the very beginning of its development Soviet statistics rejected the formal mathematical approach to the problem of index numbers. It regards the index primarily as an economic indicator. Thus the problem of index is the problem of correct measurement of the relevant processes in the national economy. Selection of the mathematical form of the index number and of its weights is determined by the character of those processes."³

Let us take up the problem of constructing regional indexes in a comparison of the economic indicators of a group of objects (countries, regions, economic regions, enterprises, associations, and so on). Such comparisons are referred to as multilateral.

Each object has its own set of indicators and its own system of relatives, which have been affected by the specific historical, natural and geographic, social, technological, organizational, and other peculiar conditions of its development.

The system of weights and relatives either of some particular one of the objects being compared or some normative (standard) system or a calculated system may be selected as the weights and relatives in constructing regional indexes in multilateral comparisons depending on the goals and tasks of those comparisons.

We have already noted that the structuring of any index must be based on economic premises reflecting the nature of the problem whose solution it is aimed at. Only in that case can indexes have clear economic content, and as a consequence they can be used more soundly and with greater effectiveness for practical economic computations. That is the main requirement which index formulas must meet. At the same time, the results of the comparison must quantitatively characterize the process of economic development of the objects being compared throughout all their multiplicity, which can be reflected in the form of the analytical requirements imposed upon regional indexes in a multilateral comparison.

We will enumerate the principal analytical requirements:

- 1) the representativeness of the results, i.e., the systems of weights and relatives used must reflect closely enough in their value the individual peculiarities of the structures of the indicators and systems of relatives of all the objects being compared;
- 2) invariance of the indexes, i.e., the results of the comparison must not depend on which object was chosen as the basis of comparison;
- 3) transitivity of the indexes, i.e., the results of a direct comparison for any pair of objects must be equal to the results of their indirect comparison in the terms of the other objects.

The requirements listed are not those of formal logic like the tests of I. Fisher, but they follow from the statement of the problem of conducting multilateral comparisons.

From the standpoint of obtaining mutually consistent results of comparison paired comparison of objects which are then reduced to a single system have a number of shortcomings: the indexes obtained are not invariant, they are not transitive, nor are they internally consistent. The deficiencies noted may result in contradictory results of a comparison, making them difficult to analyze and to form conclusions from the comparison. That situation has in fact made it necessary to develop special index methods for comparing the indicators of a group of objects.

These methods can be divided into two groups:

- I. Multilateral comparisons based on averaging the indexes of paired comparisons of objects (the methods of Walsh, Edgeworth, EKSh, etc.).
- II. Multilateral comparisons based on calculated systems of weights and relatives which are uniform for all the objects (the methods of Van Izeren, Geary, Gerardi, etc.).

The methods in Group I, although they do allow one to obtain an internally consistent system of regional indexes, are not well-founded in economic terms, since the averaged paired indexes cannot be represented in aggregate form. Yet it is the aggregate form of the index, in which the economic quantities hidden behind its numerator and denominator are clearly visible, that makes it possible to determine the economic content of the index itself. It is preferable for that reason to conduct a multilateral comparison of a group of objects with the methods of Group II. The methods of Group I can be used either for rough and approximate computations or when detailed information about the objects being compared is lacking.

The methods of Group II have been widely applied in the conduct of multilateral comparisons of the macroeconomic indicators of countries within the framework of the United Nations and the EEC.⁴ They are being used on an experimental basis at the present time in comparisons within the framework of CEMA.⁵

These methods are based on using in construction of the aggregative index numbers a single system of relatives obtained by averaging (both simple and also using weights) the individual relatives of the objects involved in the comparison.

The relationships between economic indicators (index numbers) calculated on the basis of averaged relatives have clear economic meaning and guarantee that one obtains internally consistent results of the comparison, which, however, are not equally characteristic of all the objects being compared. For instance, weighted averages of relatives are biased toward the relatives of objects with a sizable physical volume of the respective components of the indicator. Paired comparisons of small objects by means of these relatives will distort the results of the comparison, since in this case they are computed on the basis of information which is not characteristic of the objects being compared. Simple averages of relatives, although they do not depend upon the weights of the individual objects, still do not fully satisfy the requirement of representativeness, since in this case the average relatives may prove to be close in their value to the system of relatives of some particular object. Average relatives computed as simple averages merely cancel out the deviations of the individual systems of relatives of the objects (absolute or relative) from the averaged relatives, but the degree of the individual deviations may vary considerably from one object to another.

To obtain internally consistent results of comparison which are at the same time equally representative of all the objects being compared, we developed special index methods. Indexes are also constructed with these methods on the basis of a single calculated system of relatives, but it is not obtained as a consequence of averaging the individual systems of the relatives of the objects, but is derived from the structures of the indicators and the structures of the systems of relatives of the objects taking part in the comparison.

Assuming a given degree of similarity among the structures indicated, computation of the system of relatives representative of all the objects can be reduced to solving the problem of finding the minimum value of a function in nonlinear mathematical programming. Experimental computations on computer (using the materials of international statistics) have shown that such methods make it possible to obtain a system of relatives which reproduces quite closely the structure of the system of relatives and the structure of indicators of the objects, and moreover the degree of reproduction is approximately identical for all the objects being compared.

But the construction of regional indexes set forth is based on very complicated mathematical computations, and therefore it can hardly be recommended for widespread use in differing functional subsystems of the computerized system of state statistics (FP ASGS).

A simpler method of constructing regional indexes is to use a single indicator structure for the objects being compared.

Many statisticians feel that in constructing regional indexes it is legitimate to use as weights the average structure of an indicator for the objects being

compared. For instance, T. Ryabushkin writes: "The all-union structure of output can be taken as the standard structure in comparing two regions."⁶ V. Martynov remarks: "In the national regional indexology weights are determined from the indicators of the structure of the country's entire economy or from the comprehensive economy of the regions being studied. In international comparisons of levels of economic development, obviously, it is also legitimate to use as weights the indicators of the economic structure not of a single country, but of two countries taken together. In our view this can be achieved by computing the average relative indicators of the economic structure of the countries being compared."⁷ He proposes computing standardized weights (structure) as a simple arithmetic average from the structures of the indicators of the objects being compared. Yet in our view such a method has a number of defects: It does not take into account the absolute value of the individual weights, the standardized structure obtained can deviate considerably from the overall structure of the indicator of the objects being compared that has really come about, it does not deal with the fact that the results of the comparison differ in sign, nor does it guarantee the invariance and transitivity of the index numbers.

The differing sign of the results can be dealt with if in computing the summary index number one does not use the formula of the average weighted arithmetic index, but the formula of the average weighted geometric index, but there is little basis for this from the economic standpoint.

While in principle sharing the opinion of V. Martynov to the effect that the most reliable results of a comparison "can be obtained not by means of computational operations in formal mathematics, but only through combined use of all the properties of the index number function,"⁸ we will take up certain properties of the index number function which have not been previously investigated in the writings on constructing regional indexes. We will show that any aggregative regional index of physical volume can be represented as a relationship of average weighted relative shares of the objects being compared characterizing the average share which the particular object has in the total volume of the components of the indicator being compared.

We will assume that the indicators of two objects A and B are being compared. The quantities P (in this case they may be the relatives of object A or of object B) are used as the relatives of the individual components of the indicator.

The aggregative index of the physical volume for objects A and B on the basis of the same relatives P ($I_q^{A/B}$) can be written in the following form (for the sake of simplicity the indexes of the components have been omitted):

$$I_q^{A/B} = \frac{\sum P \cdot v_A}{\sum P \cdot v_B} = \frac{\sum (q_A/Q) \cdot P \cdot Q}{\sum (q_B/Q) \cdot P \cdot Q} = \frac{\sum d_q^A \cdot (P \cdot Q)}{\sum d_q^B \cdot (P \cdot Q)} = \frac{\sum d_q^A \cdot D^S}{\sum d_q^B \cdot D^S}, \quad (1)$$

in which $Q = q_A + q_B$ —total physical volume of the respective component for objects A and B;

$$d_q^A = \frac{q_A}{Q}, \quad d_q^B = \frac{q_B}{Q} \quad \text{--relative shares of the objects A and B in the volume of the individual components;}$$

$$D^S = \frac{P \cdot Q}{\sum P \cdot Q} (\sum D^S = 1) \quad \text{--the structure of the indicator common to the objects A and B which is calculated on the basis of the selective relatives P and the values of the physical volume Q.}$$

The quantities $\sum d_q^A \cdot D^S$ and $\sum d_q^B \cdot D^S$ are the average weighted relative shares of the objects A and B in the volume of the components of which the indicator being compared is comprised. The structure of the indicator common to the objects A and B and calculated on the basis of the selected system of relatives P is used as weights.

The structure of the indicator common to the objects A and B can be determined both on the basis of the system of relatives P_A (D_A^S) and also the system of relatives P_B (D_B^S):

$$D_A^S = \frac{\sum P_A \cdot Q_i}{\sum P_A \cdot Q}; \quad D_B^S = \frac{\sum P_B \cdot Q_i}{\sum P_B \cdot Q}. \quad (2)$$

We have thus shown that regional aggregative indexes of physical volume can be computed by weighting not only the individual index numbers for structures of indicators of objects (as has been done in the generally accepted Laspeyres and Paash indexes), but of the relative shares of the objects in the physical volume of the components with respect to a structure of the indicator common to the objects being compared and calculated on the basis of the systems of relatives for the objects: the Paash index is obtained for the system of object A and the Laspeyres index for the system of object B.

On the basis of this property it is possible to take the following quantity as the average (standardized) structure:

$$\bar{D}^S = \frac{D_A^S + D_B^S}{2}; \quad \sum \bar{D}^S = 1, \quad (3)$$

in which \bar{D}^S --the average (standardized) structure of the indicator for the objects A and B.

The structure \bar{D}^S (3) characterizes the actually occurring structure of the indicator of the objects A and B, since here we have eliminated the influence of the structure of the physical volumes of the components for the objects A and B (the values D_A^S and D_B^S are calculated on the basis of uniform values of the physical volumes $Q = q_A + q_B$).

The quantities D_A^S and D_B^S reflect the individual peculiarities of the structures of the systems of relatives operative at the objects A and B (the relationships of the relatives for the individual components) resulting from the uniqueness and specific nature of their development.

The standardized structure \bar{D}^S will reflect to an equal degree the structural peculiarities of the systems of relatives of each of the objects, i.e., it will be sufficiently and to an equal degree representative of each of the objects being compared.

The indexes of the physical volume are calculated according to formula (1) (in which the weights D_i^S are substituted in for the standardized weights \bar{D}_i^S), which makes it possible to obtain reversible results of the same sign and carrying a clear economic content.

Let us examine the application of this method in conducting multilateral comparisons.

Let us assume that a macroeconomic value indicator consisting of M components (products) is being compared for N objects (for example, countries) on the basis of the following initial information:

P_{ij}, q_{ij} ($i = \overline{1, M}; j = \overline{1, N}$) --the price (relative) and physical volume of the i -th component of the j -th object, respectively;
 $Q_i = \sum_{j=1}^N q_{ij} (i = \overline{1, M})$ --the summary physical volume of the i -th component for the objects being compared;
 $d_{ij}^q = q_{ij}/Q_i$ ($i = \overline{1, M}; j = \overline{1, N}$) --the relative share of the j -th object in the physical volume of the i -th component.

We calculate the structure of the indicator common to the objects being compared on the basis of the systems of relatives of the objects:

$$D_{ij}^S = \frac{p_{ij} \cdot Q_i}{\sum_{k=1}^M p_{kj} \cdot Q_k} (i = \overline{1, M}; j = \overline{1, N}), \quad (4)$$

in which D_{ij}^S --the relative share of the i -th component in the total volume of the index being compared calculated for the relatives of the j -th object.

At a given j the values D_{ij}^S ($i = \overline{1, M}$) characterize the overall structure of the indicator of the objects being compared with respect to the system of relatives of the j -th object ($\sum_{i=1}^M D_{ij}^S = 1$).

This yields as a result the totality of the structures of the indicator being compared (N structures) calculated for the various systems of relatives. Each structure reflects the peculiarities of the system of relatives pertinent to the particular object and used as the basis of its computation.

The standardized structure of the indicator is equally representative of all the objects being compared:

$$\bar{D}_i^S = \frac{\sum_{j=1}^N D_{ij}^S}{N} (i = \overline{1, M}); \quad \sum_{i=1}^M \bar{D}_i^S = 1. \quad (5)$$

The indexes of the physical volume for any two objects among those being compared are calculated with the formula

$$I_q^{k/j} = \frac{\sum_{i=1}^M d_{ik}^q \cdot \bar{D}_i^S}{\sum_{i=1}^M d_{ij}^q \cdot \bar{D}_i^S} \quad (k=\overline{1, N}; j=\overline{1, N}), \quad (6)$$

in which $I_q^{k/j}$ —index number of the physical volume "object k relative to object j."

The indexes calculated with formula (6) have clear economic content and make it possible to obtain results of the comparison with the same sign. They are invariant and transitive, they meet the requirement of internal consistency, and, as shown above, they deviate only to a minimum degree from the requirement of representativeness (at the same time its loss is relatively uniformly distributed among the objects).

On the basis of the standardized structure \bar{D}_i^S and the values Q_i it is also possible to determine a system of relatives (prices) \bar{p}_i ($i = \overline{1, M}$) whose use would result in the standardized structure \bar{D}_i^S found previously. We will call these relatives \bar{p}_i the standardized structure relatives.

In constructing aggregative indexes of the physical volume it is not the absolute values of the prices that are important, but their relationship, which demonstrate, as K. Marx put it, relative values between them.⁹ Let $\bar{p}_M = 1$, i.e., the M-th component be taken as the base component.

Assuming that the relationships of the relative shares of the individual components (in this case we are interested in relationships to the base component) are equal to the product of the price relatives and the physical volume and that $\bar{p}_M = 1$, we obtain the elementary formula for computing the standardized structure relatives:

$$\bar{p}_i = (\bar{D}_i^S : \bar{D}_M^S) : (Q_i : Q_M) \quad (i=\overline{1, M-1}). \quad (7)$$

With the standardized relatives (7) we have found it is possible to compare any structural component of an index being compared, i.e., to make what is referred to as a detailed comparison.

Once we have computed indexes of the type "standardized relatives--relatives of the object" and their relationships, it is possible to compute the index numbers of the relatives of the various objects (for example, price indexes).

We will examine the practical application of this method using the example of a comparison of the production of certain types of farm products in a number of countries--the initial information (hypothetical) is given in Tables 1 and 2.

From the figures in Tables 1 and 2 we will calculate the general structure of production of the farm product in the different national price systems. The results of the computations¹⁰ are given in Table 3.

Table 1. Gross Output of Certain Types of Farm Products (millions of tons)

Product	Country				
	A	B	C	D	E
Wheat	3.6	4.1	2.7	5.1	4.0
Rye	0.0	0.2	1.9	3.1	0.6
Barley	1.4	0.8	2.6	2.8	2.7
Corn	3.0	5.6	0.0	0.0	0.6
Oats	0.1	0.1	0.9	3.2	0.7
Potatoes	0.4	1.4	12.1	48.7	5.1
Sugar beets	2.0	2.9	5.8	14.3	6.7

Table 2. Average Sales Prices of Certain Types of Farm Products (per ton in the national currency)

Product	Country				
	A	B	C	D	E
Wheat	122.0	2,970.0	386.4	3,950.0	1,660.0
Rye	112.0	2,640.0	417.9	2,970.0	1,730.0
Barley	105.0	3,660.0	360.0	3,740.0	1,530.0
Corn	116.0	3,170.0	440.7	3,474.2	1,770.0
Oats	107.0	3,780.0	440.3	2,820.0	1,350.0
Potatoes	135.0	2,840.0	246.0	1,280.0	870.0
Sugar beets	31.0	650.0	87.5	600.0	250.0

Table 3. General Structure of Production of the Agricultural Product of the Countries Being Compared in the National Price Systems

Indicator	Product							Total
	Wheat	Rye	Bar- ley	Corn	Oats	Pota- toes	Sugar Beets	
General structure of pro- duction of farm product of countries being com- pared on basis of prices of countries (%):								
A	14.5	7.4	6.6	6.5	3.3	55.7	6.0	100.0
B	15.0	7.4	9.8	7.6	4.9	49.9	5.4	100.0
C	18.2	10.9	8.9	9.8	5.3	40.2	6.7	100.0
D	25.7	10.7	12.9	10.7	4.7	28.9	6.4	100.0
E	20.7	11.9	10.1	10.4	4.3	37.5	5.1	100.0
Standardized structure (in %)	18.8	9.7	9.7	9.0	4.5	42.4	5.9	100.0
International prices of standardized structure (in a hypothetical inter- national currency)	5.180	4.821	5.058	5.259	4.829	3.364	1.000	--

The international prices of the standardized structure, calculated with formula (7), and given in Table 3 reflect to an equal degree the national peculiarities of the price structures in all the countries taking part in the comparison and consequently the results of the comparison (the indexes--see Table 4) calculated on the basis of information sufficiently representative of any two countries being compared.

Table 4. Indexes of the Physical Volume of Production of Certain Types of Agricultural Products Computed by the Method of the Standardized Structure (in percentages)

<u>Country</u>	<u>Country</u>				
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
A	100.0	71.0	52.0	16.6	67.0
B	140.7	100.0	73.2	23.3	94.3
C	192.3	136.6	100.0	31.9	128.8
D	602.7	428.3	313.5	100.0	403.7
E	149.3	106.1	77.6	24.8	100.0

It is especially important to obtain results like this in comparisons within the framework of CEMA, since the CEMA member countries have very great differences in structure not only of production and consumption, but also of prices as a consequence not only of the unequal level of economic development, but also of differing economic and geographic conditions. The purposes, problems, and forms of development of socialist economic integration in the present stage require an organic combination of the bilateral and multilateral aspects in drafting and carrying out plans of integrative measures. Consequently, in making a comparison the results of bilateral and multilateral comparison must also be interlinked.

The simplicity and clarity of the economic content of the computations and the adherence of the results (indexes) to the analytical requirements--these are the virtues of the method of the standardized structure which make it possible to broaden the sphere of application of index number constructions in economic analysis and enhance the analytical capabilities of index numbers, to recommend this method for use in international economic comparisons with the framework of the activity of CEMA and also in spatial-regional comparisons of synthetic economic indicators within the limits of the projects of the various FP ASGS.

Of course, the method of the standardized structure is not a universal one suitable for every regional comparison. Just like any other method, it is provisional and limited to a certain degree. It has to be used, then, in combination with other index and statistical methods. We share the view of T. Ryabushkin: "The diversity of economic phenomena must naturally result in a diversity of measuring methods. That is why it is incorrect to put the question of choosing the 'ideal' index which could be equally applied to different types of economic processes and phenomena. Often it is not at all possible to express all the peculiarities even of a particular economic process by any one indicator. In such cases one inevitably must construct an entire system of indexes which make it possible to some degree to avoid one-sidedness and

oversimplification in the study of these peculiarities, and the interrelationship of the indicators in this system thereby reflects the interrelations that objectively exist among the economic phenomena they measure."¹¹

Use of a set of index methods (both traditional and also those proposed in this article) makes it possible to obtain complementary information for comparative economic analysis.

FOOTNOTES

1. T.V. Ryabushkin, "Teoriya i metody ekonomicheskoy statistiki" [The Theory and Methods of Economic Statistics], Moscow, Nauka, 1977, p 143.
2. I.S. Paskhaver, "Sredniye velichiny v statistike" [Averages in Statistics], Moscow, Statistika, 1979, p 272.
3. T.V. Ryabushkin, op. cit., pp 185-186.
4. See Yu. Ivanov, "International Comparison of the Gross Domestic Product Within the Framework of the UN," VESTNIK STATISTIKI, No 4, 1976.
5. See L. Antsiferova, "A New Direction in International Comparisons of the CEMA Member Countries," VESTNIK STATISTIKI, No 1, 1983.
6. T.V. Ryabushkin, op. cit., p 189.
7. V. Martynov, "The Index Method of Comparing Levels of Economic Development of the USSR and the United States," VESTNIK STATISTIKI, No 12, 1980, p 43.
8. Ibid., p 38.
9. See K. Marx and F. Engels, "Soch." [Works], Vol 23, p 108.
10. We developed a program in the programming language FORTRAN IV to do these computations and those which follow by the method of the standardized structure.
11. T.V. Ryabushkin, op. cit., p 186.

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ECONOMIC MODELING AND COMPUTER TECHNOLOGY APPLICATION

ECONOMIST PROVIDES FIXED CAPITAL, INVESTMENT PLANNING MODELS

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 86 pp 117-122

[Article by A. Silayev, candidate of economic sciences: "Planning of Production, Fixed Capital and Capital Investments"]

[Text] The development of the economy at the present stage is characterized by continuous and substantial modernization of production. Managing this process and, consequently, improving the balance of social production and its effectiveness depend largely on how interrelated are the planning of the amounts and structure of production, fixed capital, capital investments and distribution of labor resources. This interrelationship must be and is being carried out at the stage of both ongoing and long-range planning, and it requires complex, multi-variant calculations. One of the main objectives of this work is to determine the required structure of capital investments to achieve the planned advances in production, deriving from the long-range amounts and structure of production. The latter serve as the basis for working out variants of progressive changes in the structures of capital investments and fixed capital. However, the methods of establishing the branch structure of production are not always adequate to the actual production processes. Therefore, in accomplishing pre-plan projections the need often arises to solve the opposite task: to determine the branch structure of production stemming from the planned volume and branch structure of capital investments.

Capital investments influence the volume of production through fixed capital (changes in their volume and structure as a result of their introduction and retirement). The dynamic and growth of capital depend on many factors. For example, speeding up its introduction into operation may take place even without increasing capital investments, due to a sound choice of the structure of the latter. Therefore, to improve the quality of planned (forecast) calculations it is necessary to determine the influence of each individual factor on the resulting index -- the volume of production and its structure.

In practice there have been frequent instances when the equilibrium in the interaction of balances of labor resources and fixed capital has been violated. This is related to the fact that the modernization of capital takes place mainly as a result of its introduction, not accompanied by the necessary

level of retirement. Consequently, unnecessary jobs arise and the capital-output ratio declines (capital intensiveness increases more rapidly than labor productivity). An uncontrolled increase in fixed capital (largely stemming from inadequate readiness of the methods for planning its structure) leads to a worsening of the indices of its utilization.

Advances in the manufacturing products list are achieved most of all by the creation of new branches and industries; i.e., changes in the branch structure of capital investments. Effective planning of the technological structure of investments (distribution of monies between the active and passive parts of fixed capital) is important in this. It maintains the necessary coordination of plans: for capital construction (in particular, such items as volume of construction and assembly work); production of products of the machinebuilding sub-branches which deliver machine tools and equipment to the economy) and the construction materials industry. Presently it is necessary to increase the share of investments in the technological structure aimed at reproducing the active part of fixed capital. This, in turn, requires corresponding advances in the reproductive structure of capital investments, and most of all the directing of funds into technical retooling and redesign of existing enterprises. Raising their share to the optimum size is an effective way of improving the technological structure, and facilitates reducing the amount of unfinished construction. Maximal synchronization between the realization of capital investments and the placing into operation of fixed capital is attained when carrying out technological retooling and redesign.

Certain positive changes in the reproductive structure of investments have been observed in the country's economy in recent years. Thus during 1980-1983 the share of funds allotted for technological retooling and redesign of existing enterprises and new construction increased respectively from 31.6 to 35.2 percent and from 36.3 to 37 percent, and funds for expanding existing enterprises and maintaining their capacities declined from 27.8 to 23.7 percent, and from 4.3 to 3 percent. However, in our view this has an insignificant effect on the technological structure of capital investments (the share of monies directed during this period toward modernizing the active part of fixed capital increased from 35.7 to 36.9 percent).

Capital investments, as a rule, influence the volume and structure of fixed capital, and through it production, over a rather long period of time. Therefore, basic advances in the structure of the economy and in the production of one or another type of product can be given in the long-term plan, while current planning only takes into account the results of the fulfillment of long-range targets in this branch.

Interrelated planning of the amounts and structures of production, fixed capital, capital investments and distribution of labor resources assumes the establishment of both qualitative links among individual elements, as well as of their quantitative parameters. The link between branch (sub-branch) structures of the gross national product and fixed capital is characterized by the following model:

$$T_{D(A)} = T_P \cdot \frac{a(A) \cdot T_f}{T_{f(A)}}, \quad (1)$$

where $T_p, T_{p(A)}$ are the production growth rates for industry as a whole and for branch A;

$T_j, T_{j(A)}$ are the rates of change of the output-capital ratio of production in the industry as a whole and in branch A;

$\alpha_{(A)}$ is the coefficient of elasticity, determined by the ratio of the change in the growth rate of the overall volume of production of the industry to the growth rate in the volume of production of branch A which caused this change. It is found by the method of least squares from a logarithmically normal system of corresponding linear equations.

This model makes it possible to refine (make variant calculations), at the stage at which the forecast or plan is being developed, the branch structure of production resulting from assumed growth rates of the overall volume of production and changes in its output-capital ratio. The share of production of a given branch (type) will increase if its growth rate in the given period is greater than that for all production. And this will take place (with some simplification in the conditions examined) if the output-capital ratio of the production of the branch (type) grows more slowly (declines more rapidly) than that of all production.

Analysis of statistical data reveals a close functional link between the relative share of the production of the corresponding branch and the index of change of its output-capital ratio. Thus, the answer to the sharpest "jump" in the output-capital ratio growth index for production of the food industry (from 1.136 in 1975 to 1.523 in 1984 by comparison with 1970) is a reduction in the relative share of this branch in the overall volume of industrial production of more than 2 points (from 17.6 percent to 15.4 percent). Detailed analysis of this interrelationship (see tables 1, 2 and 3) showed that during the period 1975-1984 the index of change of the output-capital ratio also increased in the lumber, wood processing and paper industry, the construction materials industry and light industry, which led to a decline in their share of the overall volume of production. At the same time, lower growth indices of the production output-capital ratio were observed in machinebuilding and metalworking and in the chemical and petrochemical industry, which were accompanied by an increase in the relative share of these branches.

In conducting experimental calculations using dynamic series of production volumes for 1970-1973, the values of coefficients α for a number of industrial branches were established. For machinebuilding and metalworking the value was 1.278; for light industry -- 0.744. This corresponds to the higher production growth rates in machinebuilding and the lower rates in light industry, by comparison with industry as a whole.

A comparison of growth rates $T_{p(A)}$, calculated according to model (1) for machinebuilding and metalworking and for light industry, with growth rates $T_{p(A)B}$ cited in the official statistics shows insignificant deviations -- approximately 2 percent (Table 4).

Table 1

Changes in the Relative Amount of Production of Individual Branches
in Total Industrial Production (in %)

Branch	1975	1980	1981	1982	1983	1984
Industry as a whole	100	100	100	100	100	100
Including:						
electric power	3.7	3.8	3.8	3.9	3.8	3.9
fuel	8.7	8.3	8.1	8.0	7.8	7.6
chemical and petro- chemical	5.8	6.2	6.4	6.4	6.5	6.6
machinebuilding and metalworking	20.1	24.3	24.8	25.4	25.8	26.4
lumber, woodworking and paper	5.1	4.5	4.5	4.5	4.5	4.5
construction materials	4.4	3.9	3.9	3.8	3.9	3.8
light industry	16.8	16.2	16.1	15.7	15.2	14.7
food industry	17.6	15.4	15.3	15.4	15.6	15.4
flour and cereals and mixed feed	2.7	2.9	2.8	2.8	2.8	2.8

Table 2

Dynamics of Indices of Output-Capital Ratio Growth of USSR Industrial Branches
(1970 = 1)

Branch	1975	1980	1981	1982	1983	1984
Industry as a whole	1.060	1.237	1.286	1.335	1.371	1.398
Including:						
electric power	1.015	1.086	1.125	1.150	1.182	1.175
fuel	1.076	1.350	1.452	1.558	1.662	1.785
chemical and petro- chemical	0.980	1.137	1.184	1.231	1.244	1.251
machinebuilding and metalworking	0.934	0.990	1.019	1.045	1.055	1.056
lumber, woodworking and paper	1.147	1.451	1.514	1.550	1.583	1.617
construction materials	1.121	1.453	1.500	1.559	1.574	1.605
light industry	1.171	1.373	1.418	1.503	1.584	1.664
food industry	1.136	1.420	1.474	1.486	1.490	1.523
flour and cereals and mixed feed	1.406	1.939	2.153	2.250	2.326	2.371

Table 3

Change in the Correlation Between Output-Capital Ratio Growth Rates for Industry as a Whole and in its Separate Branches ($T_i/T_{(A)}$)

Branch	1975	1980	1981	1982	1983	1984
electric power	1.044	1.139	1.143	1.161	1.160	1.190
fuel	0.935	0.916	0.886	0.857	0.825	0.783
chemical and petro-chemical	1.082	1.088	1.086	1.084	1.102	1.118
machinebuilding and metalworking	1.135	1.249	1.262	1.278	1.300	1.324
lumber, woodworking and paper	0.924	0.853	0.849	0.861	0.866	0.865
construction materials	0.946	0.851	0.857	0.856	0.871	0.871
light industry	0.905	0.901	0.907	0.898	0.866	0.840
food industry	0.933	0.871	0.872	0.892	0.920	0.918
flour and cereals and mixed feed	0.709	0.638	0.597	0.593	0.589	0.590

Table 4

Years	<u>Machinebuilding and Metalworking</u>					<u>Light Industry</u>			
	T_i	$T_i/T_{(A)}$	$T_{(A)_1}$	$T_{(A)_2}$	$\frac{T_{(A)_1} - T_{(A)_2}}{T_{(A)_1}}$	$T_i/T_{(A)}$	$T_{(A)_1}$	$T_{(A)_2}$	$\left \frac{T_{(A)_1} - T_{(A)_2}}{T_{(A)_1}} \right $
1980	1.78	1.249	2.51	2.56	-0.05	0.901	1.47	1.48	-0.01
1981	1.84	1.262	2.68	2.71	-0.03	0.907	1.51	1.52	-0.01
1982	1.90	1.278	2.86	2.84	0.02	0.888	1.53	1.52	0.01
1983	1.98	1.300	3.12	3.02	0.10	0.866	1.55	1.54	0.01

Advances in the structure of production, and consequently in the structure of fixed capital and capital investments, under otherwise equal conditions (1) should occur toward increasing the relative share of those branches which are characterized by the lowest output-capital ratio. This makes it possible to improve the effectiveness of social production and accelerate its intensification. Machinebuilding, where the level of the capital-output ratio is comparatively high, can serve as an example of such a branch. This is one of the branches which determines the degree of acceleration of scientific and technological progress.

It is proposed that the following mathematical economic model be used for planning the distribution of the number of those employed in industry throughout its branches:

$$T_{H(A)} = T_s + \beta(A) \frac{T_q - T_{H(A)}}{T_{q(A)} - T_s}, \quad (2)$$

where $T_s, T_{H(A)}$ is the growth rate of the number of those employed in industry as a whole and in branch A;

$\beta(A)$ is the coefficient of elasticity, which is determined through the ratio of the change in the growth rate of the overall number of those employed in industry, to the growth rate of the number of those employed in sub-branch A, which causes the change;

$T_q, T_{q(A)}$ are the growth rates of the capital-labor ratio in industry as a whole and in branch A; and

$T_s, T_{H(A)}$ are the growth rates of wages in industry as a whole and in branch A.

Coefficients of elasticity $\alpha(A)$ and $\beta(A)$ are determined by the influence of the change in the growth rates of the indices characterizing industry as a whole on the dynamic of the indices reflecting the development of each branch. This influence also depends on the dynamic of a number of accompanying processes; most of all on the capital-labor ratio; output-capital ratio of production, and the average wage of industrial production personnel (more accurately, on the proportions which are established between these indices in the production process).

To determine the forms of dependence of the level of labor productivity on the level of its capital-labor ratio, a mathematical economic model of the following kind may be used:

$$T_s = T_q^\gamma, \quad (3)$$

where T_s, T_q are the growth rates of the productivity and capital-labor ratio; and

γ is the coefficient of elasticity by means of which the influence of the growth rates of the capital-labor ratio on the growth rates of labor productivity are determined.

This model shows by how many points it is necessary to increase the capital-labor ratio in order to attain the planned growth in labor productivity; i.e., it makes it possible to determine the cost of increasing labor productivity in units of its capital-labor ratio. Because the cost for each additional point of labor productivity growth rises, and because out of a number of factors

which influence the dynamics of labor productivity it is difficult to give preference to any single factor, it is proposed that the economic model use, not the ratio of structural coefficients, but a correcting index of degree (γ) in the form of a dependence on time.

The values of coefficients γ for industry as a whole and for individual branches has been calculated based on statistical data for 1975-1983. The greater the size of γ , the more an increase in the capital-labor ratio affects growth in labor productivity. Value γ is 0.654 for USSR industry as a whole and fluctuates for industrial branches from 0.975 in machinebuilding and metalworking to 0.462 in the food industry. If coefficient γ is greater than one, this indicates higher growth rates for labor productivity by comparison with the growth rates of the capital-labor ratio. (However, at the present time there are no such branches in USSR industry.)

Increasing the cost of each point of labor productivity growth in industry necessitates placing additional fixed production capital into operation, which in turn requires additional capital investments for the development of the branch's fixed capital.

Lessening the influence of the capital-labor ratio on the dynamic of labor productivity is associated with the action of such factors as:

reducing the relative share of the active part of fixed industrial production capital, as a result of which its technical structure is worsened (This occurs due to a discrepancy in planning the technological structures for the introduction and retirement of fixed production capital.);

insufficiently rapid growth in the share of capital investments for redesign and technical retooling of existing enterprises, and in the reproductive structure of capital investments;

a not always high technical level of newly introduced capital, as a result of which retired equipment is not replaced by more productive models;

an increase in the capital intensiveness of production, occurring as the result of an increased production output-capital ratio, which leads to increased cost for new machinery and equipment;

a low machine shift coefficient;

a worsening in the use of production capacities, which is manifested in that the growth rates of production capacities exceed the growth rates of production.

The combined influence of these factors leads to a decline in the capital-output ratio index; i.e., to a more rapid increase in the capital-labor ratio than in labor productivity.

To plan the dynamic of the technological structure of fixed capital, it is necessary to determine:

the amount of growth of fixed capital ($\Delta\Phi$) and its technological structure ($\Delta\Phi_{act} + \Delta\Phi_{pass}$) ;

the amount (W) and the technological structure for retirement of fixed capital ($W_{act} + W_{pass}$) ;

the amortization fund for renovation (R) and its distribution for the modernization of the active (R_{act}) and the passive (R_{pass}) parts of fixed capital.

Inequality (4) serves as the condition for shifting to an improved technological structure of fixed capital:

$$\frac{\Phi_{act} + \Delta\Phi_{act} + R_{act} - W_{act}}{\Phi + \Delta\Phi + R - W} > \frac{\Phi_{act}}{\Phi} \quad (4)$$

With respect to this, planning the replacement of fixed capital which is being retired must be carried out so that the part of the monies of the amortization fund for renovation of the active part of the capital is greater than the amount of retirement of the active part of fixed capital. Only by fulfilling this requirement will the technological structure of fixed capital improve in the future.

To reduce the relative share of construction and assembly work in the technological structure of capital investments and the passive part of fixed capital in their technological structure (capital), as well as to overcome the unfavorable tendency toward technical obsolescence of the active part of fixed capital, it is necessary to plan an increase in the coefficient of retirement of the active part of fixed production capital. This is the ratio of the retirement of the active part of capital during the year to its balance value at the start of that year. Also required are an increase in the coefficient of modernization of the active part of fixed production capital (the ratio of the active part of the capital during the year to its balance value at the end of that year), and an increase in the correlation between the amounts of retirement and of introduction of fixed production capital during the period.

The share of the active part of fixed capital being retired is, as a rule, about 90 percent of all fixed capital being retired, due to the more rapid aging of equipment than of buildings and facilities. The need to accelerate the replacement of machinery, equipment, transport resources and conveyances, compared to buildings and facilities, is also caused by the development of scientific and technological progress. Consequently, to preserve (and in the future improve) the existing technological structure of fixed industrial production capital, the share of the active portion of fixed capital introduced must be maintained at a sufficiently high level. In this connection, the role of technical retooling, re-design and modernization of existing enterprises, as the most progressive way of modernizing fixed production capital, should again be emphasized.

Using the proposed mathematical apparatus it is possible to give a quantitative assessment to each factor, through the amount of the elasticity of its influence on the mentioned structures. This approach makes it possible to regulate the relative production of individual industrial branches and to distribute industrial production personnel among branches. The mathematical economic models examined can be used for mid-range and long-range forecasting at the stage of pre-plan projecting.

FOOTNOTE

1. The structure of the product manufactured (and consequently of changes in this structure) is determined most of all by demands, their size and the opportunities for satisfying them. Therefore, at each stage of economic policy priorities are established in the development of individual branches and in the manufacture of specific products.

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